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ARMY MEDICAL DEPARTMENT

REPORT

FOR THE YEAR 1891;

WITH APPENDIX.

VOLUME XXXIII.

LONDON:
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1893.

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TO THE RIGHT HONOURABLE

THE SECRETARY OF STATE FOR WAR.

SIR,

I HAVE the honour to submit the accompanying Report on the Health and Sanitary Condition of the Army for 1891.

I have the honour to be,
SIR,
Your most obedient
Humble Servant,
W. A. MACKINNON,
Director-General.

MEDICAL DIVISION, WAR OFFICE,
1893.

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ARMY MEDICAL DEPARTMENT REPORT FOR 1891.

STATISTICAL REPORT.

Troops at Home and Abroad.

THE average annual strength of the troops serving at home and abroad in 1891, as computed from the returns received by the Army Medical Department, was 196,270 warrant officers, non-commissioned officers and men (exclusive of Colonial Corps); the admissions into hospital in this force were 193,591 and the deaths 1,808. The rates represented by these numbers are for admissions into hospital 986·3 and for deaths 9·13 per 1,000 of the average annual strength, the latter being calculated on a strength of 197,946, which includes detached men.

The statistics of some of the most important of the results of sickness, in every Command in which the troops were stationed, are exhibited in the following Table:—

1891.

White Troops.	Average Strength.	Admitted into Hospital.	Died.	Sent Home as Invalids.	Discharged as Invalids.	Constantly non-effective from Sickness.
Troops at Home and Abroad	**196,270**	**193,591**	**1,808**	**2,374**	**2,872**	**10,801·21**
United Kingdom	99,308	76,693	499	—	1,466	4137·19
Gibraltar	4,682	2,866	22	67	28	186·02
Malta	7,697	5,054	50	178	118	344·76
Cyprus	554	311	2	6	5	15·04
Egypt	3,172	3,141	23	71	55	185·47
Canada	1,424	531	8	11	18	24·37
Bermuda	1,601	773	5	24	17	40·69
West Indies	1,096	1,391	15	20	10	82·78
South Africa and St. Helena	3,185	2,656	29	78	53	182·51
Mauritius	580	684	15	8	8	35·42
Ceylon	1,251	1,147	15	44	28	67·28
China	1,334	1,651	14	29	14	72·17
Straits Settlements	1,270	1,463	6	45	26	118·73
India	66,178	91,811	1,082	1,793	1,026	5308·78
On board Ship	2,938	3,419	23	—	—	—

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Troops at Home and Abroad.

1891.

White Troops.	Ratio per 1,000 of Strength. Admitted.	Died.	Sent Home as Invalids.	Discharged as Invalids.	Constantly non-effective from Sickness.	Average sick-time to each Soldier.	Average duration of each case of Sickness.
	*	†	‡	§	‖	Days.‖	Days.‖
Troops at Home and Abroad	**986·3**	**9·13**	**25·25**	**14·73**	**55·87**	**20·39**	**20·73**
United Kingdom	772·2	4·94	—	14·51	41·66	15·20	19·69
Gibraltar	612·1	4·70	14·31	5·98	39·73	14·50	23·69
Malta	656·6	6·49	28·13	15·33	44·79	16·35	24·90
Cyprus	561·3	3·61	10·83	9·02	27·15	9·91	17·65
Egypt	990·2	7·25	22·38	17·38	58·47	21·34	21·55
Canada	372·8	5·61	7·72	12·64	17·11	6·25	16·75
Bermuda	482·8	3·12	14·99	10·61	25·42	9·28	19·21
West Indies	1269·1	13·69	18·25	9·12	75·53	27·57	21·72
South Africa and St. Helena	883·9	9·10	24·49	16·63	57·30	20·92	25·08
Mauritius	1179·4	25·86	13·79	13·79	61·07	22·29	18·90
Ceylon	916·8	11·99	35·17	22·38	53·78	19·63	21·41
China	1237·6	10·49	21·74	10·49	54·10	19·75	15·96
Straits Settlements	1151·9	4·72	35·43	20·47	93·48	34·12	29·62
India	1387·3	16·86	27·09	15·50	80·22	29·28	21·05
On board Ship	1163·7	7·83	—	—	—	—	—

* Calculated on strength, excluding men detached (1,676).
† Calculated on strength, including men detached.
‡ Calculated on strength, excluding United Kingdom and troops on board ship.
§ Calculated on strength, including men detached, and excluding troops on board ship.
‖ Calculations exclude men detached and troops on board ship.

1881 to 1890.

White Troops.	Aggregate strength for 10 years.	Admitted into Hospital.	Deaths.	Sent Home as Invalids.	Discharged as Invalids.	Constantly non-effective from Sickness.
Troops at Home and Abroad	**1,832,264**	**1,923,302**	**18,328**	**26,640**	**30,357**	**101,620**
United Kingdom	919,826	755,079	5,631	—	17,875	42,330
Gibraltar	45,881	36,723	276	1,055	411	2,207
Malta	53,181	37,158	463	1,188	618	2,419
Cyprus	6,069	5,105	54	84	29	260
*Egypt	50,278	61,560	1,248	3,776	1,321	3,683
Canada	14,580	9,306	76	324	288	519
Bermuda	14,011	8,741	147	207	139	451
West Indies	9,500	9,833	138	220	138	486
South Africa and St. Helena	42,062	32,711	660	1,772	873	2,182
Mauritius	4,110	7,427	63	198	67	347
Ceylon	10,051	11,637	129	314	151	637
China	11,128	11,868	167	395	297	581
Straits Settlements	10,175	12,447	71	231		632
India	614,378	895,966	9,088	16,876	8,150	44,886
On board Ship	27,034	27,741	177	—	—	—

* For eight years only (1883–90).

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1881 to 1890.

Troops at Home and Abroad.

White Troops.	Ratio per 1,000 of Strength.					Average sick-time to each Soldier.	Average duration of each case of Sickness.
	Admitted.	Died.	Sent Home as Invalids.	Discharged as Invalids.	Constantly non-effective from Sickness.		
Troops at Home and Abroad	**1049·7**	**9·88**	**30·09**	**16·60**	**56·29**	**20·55**	**19·57**
United Kingdom	820·9	5·97	—	19·43	46·02	16·79	20·46
Gibraltar	800·4	6·01	22·99	8·96	48·10	17·16	21·94
Malta	698·7	8·70	22·34	11·62	45·48	16·60	23·76
Cyprus	841·1	8·90	13·84	4·78	42·84	15·64	18·59
*Egypt	1224·4	28·80	75·10	26·27	73·25	26·74	21·84
Canada	638·3	5·21	22·22	19·75	35·59	12·99	20·35
Bermuda	623·9	10·49	14·77	9·92	32·19	11·75	18·88
West Indies	1035·0	14·52	23·16	14·52	51·16	18·67	18·04
South Africa and St. Helena	777·7	15·69	42·13	20·75	51·88	18·93	24·35
Mauritius	1807·0	15·33	48·17	16·30	84·43	30·81	17·05
Ceylon	1157·8	12·83	31·24	15·02	63·38	23·13	19·98
China	1066·5	9·61	35·49	13·94	52·26	19·07	17·88
Straits Settlements	1223·3	6·98	22·70		62·13	22·68	18·54
India	1458·3	14·79	27·47	13·26	73·06	26·67	18·29
On board Ship	1026·1	6·55	—	—	—	—	—

* For eight years only (1883–90).

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II.—ON THE HEALTH OF THE TROOPS SERVING IN THE UNITED KINGDOM.

Sickness and Mortality.

United Kingdom.

The average strength of warrant officers, non-commissioned officers and men serving in the United Kingdom during the year 1891 was, according to the annual returns furnished by medical officers, 99,308. This does not include certain men detatched from their corps, the average number of whom is computed to have been 1,676.

The most important of the statistics of sickness and mortality among the troops quartered in the three great divisions of the Kingdom, England and Wales, Scotland, and Ireland, and also among those in the United Kingdom as a whole, are shown in the following table:—

1891.	Average Strength.	Admissions.	Deaths.	Invalids.	Constantly Sick.
England and Wales - -	70,488	56,463	361	1,108	3035·27
Scotland - - - -	3,854	2,554	17	42	102·57
Ireland - - - -	24,966	17,676	121	316	949·35
United Kingdom -	99,308	76,693	499	1,466	4137·19

(*continued.*)

1891.	Ratios per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of each case of Sickness.
	Admissions.	Deaths.*	Invaliding.*	Constantly Sick.		
					Days.	Days.
England and Wales - -	801·0	5·07	15·56	43·77	15·97	19·94
Scotland - - - -	662·7	4·28	10·59	26·61	9·71	14·66
Ireland - - - -	708·0	4·68	12·22	38·03	13·88	19·60
United Kingdom -	772·2	4·94	14·51	41·66	15·20	19·69

* Calculated on strength, including men detached (England and Wales, 684; Scotland, 113; Ireland, 879) 1,676 in number.

If comparison be made with the corresponding table for the previous year, it will be found that in the case of England and Wales the ratio of admissions has declined by 35·9, that of mortality by ·64, and that of constantly sick by 2·41 per 1,000. The average sick time to each soldier was shorter by almost a day, and the average duration of each case of sickness by a fifth of a day. Compared with corresponding average ratios for the preceding five years, the admission rate is lower by 5·9, the death rate by ·54, and the constantly sick

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rate by 2·85 per 1,000. The average sick time to each soldier, and the average duration of each case of sickness are both shorter by rather more than a day than the corresponding average periods for the previous five years. *United Kingdom.*

In Scotland the admission ratio was lower than in the preceding year by 57·0, the death rate by 1·77, and the constantly sick rate by 2·66 per 1,000. The average sick time to each soldier was shorter by ·97 of a day, and the average duration of each case of sickness by ·18 of a day. In comparison with the corresponding average ratios for the previous five years a decline is observed in all the ratios of sickness and mortality being as much as 24·2 in the case of admission, 1·69 in that of mortality, and 4·90 in that of constantly sick. The average sick time to each soldier and the average duration of each case of sickness are also shorter by 1·79 and 2·08 days respectively.

In Ireland the ratio of admission shows a decline of 40·5 per 1,000 as compared with that in the previous year, the ratio of mortality is lower by ·27 and that of constant inefficiency through sickness by 3·09. The average sick time to each soldier was less by 1·13 days, and the average duration of each case of sickness by nearly half a day. Compared with the five years' average the admission rate is lower by 14·9, the death rate by ·33, and the rate of constant inefficiency through sickness by 2·17 per 1,000. The average sick time to each soldier and the average duration of each case of sickness are shorter by ·59 of a day and ·70 of a day respectively.

Taking the United Kingdom as a whole the ratio of admissions has declined by 38·4 per 1,000 as compared with the corresponding ratio for the preceding year, the death ratio is lower by ·59, and the constantly sick rate by 2·63. The average sick time to each soldier was less by nearly a day and the average duration of each case of sickness by a quarter of a day than the corresponding periods in the previous year. Compared with similar average ratios for the preceding ten years the decrease in admission rate is as much as 48·7 per 1,000, that in the death rate 1·03, and that in the ratio of constant inefficiency through sickness 4·36 per 1,000, and compared with the corresponding average decennial periods the average sick time to each soldier has decreased by 1·59 days and the average duration of each case of sickness by ·77 of a day.

The total loss by death, and discharge by invaliding on account of medical unfitness during the year was 1,965 men, equal to a ratio of 19·45 per 1,000 of strength which is less than the corresponding rate in the previous year by 2·80. The principal statistics of sickness and mortality, arranged according to the different groups and orders of diseases, are given in Abstract I. for the whole of the troops in the United Kingdom, and in Abstracts A., B., and C. for the troops quartered in England and Wales, Scotland, and Ireland respectively.

General Diseases.—*Diseases dependent on morbid Poisons.*—The number of admissions returned under the head of other *eruptive fevers* in the United Kingdom was 733, and there were 3 deaths. The admission ratio, therefore, was 7·4, and the death rate ·03 per 1,000, those in the preceding year having been 6·2 and ·04, and the average ratios of the previous five years 6·6 and ·04 respectively.

Only one case of *small-pox* was recorded during the year; it occurred at Hamilton in Scotland in the person of a recruit who it is believed contracted the disease prior to enlistment. In the preceding year there was no case.

Scarlet Fever.—The admissions for this disease numbered 215, and there were 3 deaths, including that of a man detached from his corps, being in the ratios of 2·2 and ·03 per 1,000, respectively. In the previous year these ratios were 2·4 and ·03 per 1,000, while the average ratios for the preceding five years were 1·8 and ·03 per 1,000 respectively. In England and Wales alone there were 183 cases and 1 death, equal to ratios of 2·6 and ·01 per 1,000 as compared with 3·1 and ·04 respectively in the preceding year. In Scotland 3 cases only occurred, equal to a rate of ·8 per 1,000; in the previous year there was not one admission. In Ireland the admissions numbered 29 and there were 2 deaths; the ratio of admission was therefore 1·2, and that of mortality ·04 per 1,000, the former being higher by ·5 than in 1890, but there was no mortality in that year. With the exception of the Channel Islands and the Curragh, all the districts were affected to some extent. The disease occurred at 28 stations, and of the total number of cases 121, or considerably more than half, took place at Aldershot, and one of them was fatal. In the previous

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United Kingdom.

year there were 75 cases and in 1889 only 26. At Chatham there were 21 cases mostly mild, but in 1890 there were only 8. At Woolwich the prevalence of this disease declined considerably, the number of attacks being only 16 as compared with 80 in the previous year. At Dundalk there were 15 attacks and 1 death; the disease was also rather prevalent among the civilian population. It will be observed that four-fifths of the attacks occurred in the stations already mentioned, leaving the remaining fifth to be divided over 23 stations, of which London accounts for 8 cases, Dublin, Belfast, and Cahir, for 3 each, Colchester, Portsmouth, Dorchester, and Glencorse, for 2 respectively, and fifteen other stations for single cases each.

Measles.—The number of admissions for measles was 105, and there was no death. The ratio of admission, therefore, was 1·1 per 1,000, the same as in the preceding year, but below the average rate of the previous five years by ·9. In England and Wales alone there were 96 admissions, or 1·4 per 1,000; in Scotland there were 4 admissions, or 1·0 per 1,000; and in Ireland 5 admissions, or ·2 per 1,000. In 1890 the corresponding ratios were 1·2, 4·3, and ·2 respectively. The Thames district, the Channel Islands, the Belfast district, and the Curragh were not affected by the disease, but it occurred in all the other districts. The disease appeared at 28 stations, Woolwich showing the greatest number of cases, 26 as compared with 14 in 1890, Aldershot 16, the same as in the previous year, and London 15 as compared with 23. Of the remaining stations, Windsor showed 7 admissions, Preston, Exeter, and Dublin 4 each, Colchester 3, Gosport 3, Carlisle, Warrington, Portsmouth, and Hamilton 2 respectively, and there were single cases at 15 stations.

Epidemic Rose Rash caused 14 admissions as compared with 1 in the previous year. There were 4 cases at Dover, 4 in London, 2 at Devonport, and the remaining 4 were single cases at separate stations.

The remaining admissions under the head of eruptive fevers were 6 for chicken-pox, and 393 for cow-pox; in 1890 the numbers for these affections were 4 and 262 respectively.

Enteric Fever.—109 admissions and 17 deaths are recorded, the corresponding numbers in the previous year having been 126 and 30 respectively. The ratio of admissions was 1·1 per 1,000, lower than the corresponding ratio in the preceding year by ·2, and below the average rate of the previous ten years by ·3. The ratio of mortality was ·17 per 1,000, less than in 1890 by ·12, and less than the decennial average by ·14. The per-centage of mortality to attack was 15·6, that in the previous year having been 23·9, and the average of ten years being 23·4. In England and Wales there were 49 admissions and 7 deaths, being in the ratios of ·7 and ·10 per 1,000 respectively, as compared with ·9 and ·18 in the previous year, and with ·9 and ·22, the average rates of five years. In Scotland there were 5 attacks, none of them fatal; the admission ratio, 1·3 per 1,000 as compared with ·3 in 1890, and ·8 the average rate. In Ireland the admissions were 55, and the deaths 10 in number; the former being in the ratio of 2·2, and the latter in that of ·38 per 1,000. In the previous year the corresponding ratios were 2·6 and ·58, and the quinquennial average rates were 2·7 and ·61 per 1,000. In England and Wales the per-centage of mortality to attack was 14·3 as compared with 21·3 in the preceding year, and in Ireland it was 18·2 as compared with 23·5. Every district was affected to some extent, though in one or two there was only a single case. The number of stations at which attacks occurred was 36; in the preceding year it was 30. As in previous years the station at which there were most cases of enteric fever was Dublin, 30 with 2 deaths being returned; these numbers do not differ much from the corresponding numbers in the preceding year, 34 cases and 6 deaths, but both these years show a much less prevalence than there was in 1889, when 63 cases and 8 deaths occurred, and than in 1888, when there were 55 cases and 9 deaths; in the two last named years, more than half the cases occurred in the Royal barracks, which have not yet since been occupied. Of the cases admitted 5 came from Ship Street, Wellington, Beggar's Bush, and Richmond barracks respectively, 3 from Portobello barracks, 3 from Pigeon House Fort, 2 from Island Bridge barracks, and 2 from the Royal Infirmary. Of the cases from Ship Street barracks one proved fatal. No special cause is mentioned for these cases, and it is stated that the drainage has been much improved, but some further sanitary improvements are mentioned. One of the cases from Richmond barracks also proved

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fatal; no information as to the origin of the attacks was available, except that one was believed to have been contracted away from the station. Of the cases from Beggar's Bush barracks it is stated that only in one was there suspicion of the disease having originated in barracks. In Portobello and Wellington barracks the drainage is stated not to have been in a satisfactory state and under consideration for improvement; the cases from these barracks may therefore have been influenced by this condition. The causes of the cases from Pigeon House Fort and Island Bridge barracks were not defined, and of two cases which occurred at the Royal Infirmary, one was that of an orderly in attendance on cases of the disease. At Aldershot there were 12 attacks and 2 deaths from enteric fever, the causes of the disease could not be definitely traced; ten of the cases occurred in the south and two in the north camp. At the Curragh there were 11 cases, 4 being fatal; it is stated of them that no insanitary condition existed which could clearly be pointed out as a cause. At Devonport 7 cases occurred, the origin of which it is said could not be traced to any local insanitary conditions. 4 attacks, one of them fatal, occurred at Belfast; three of these were admitted from Holywood musketry camp, and the other from Victoria barracks. 3 cases occurred at Cork, two of which were contracted elsewhere, and the third in the city; there were also 3 cases at Shoeburyness, one of which was believed to have originated away from the station, but the others were possibly connected with some drainage under repair. At Manchester there were 4 cases, two being men who were on furlough from their regiments, one of whom died. At Fermoy 2 cases occurred, one of which proved fatal; the cause of the disease was not discovered. There were also two cases, which recovered, at Newcastle, Exeter, Colchester, London, Glasgow, and Ballinrobe respectively. At each of the following places a fatal case occurred:—Lancaster, Norwich, Portsmouth, Chatham, Portumna, and Templemore, and at Birmingham, Coventry, York, Landguard Fort, Weedon, Caterham, Hounslow, Hythe, Shorncliffe, Woolwich, Piershill, Glencorse, Hamilton, Jersey, and Newry respectively there was a single case which did well. *United Kingdom.*

Other Continued Fevers were the cause of 465 admissions and 2 deaths. The ratio of admission, therefore, was 4·7 per 1,000, which is in excess of the corresponding rate in the preceding year by ·5, but below the average rate of the previous five years by 1·0. In England and Wales alone the admission rate was 4·3 per 1,000, and is higher than the ratio in 1890 by 1·4, but almost identical with the quinquennial average rate. The ratio in Scotland was 5·2 per 1,000 below the last year's rate by 4·4, and the average rate by 2·7. In Ireland the admission ratio reached 5·6 per 1,000, but is lower than in 1890 by 1·3, and than the five years' average rate by 3·6. The admission ratios in the various districts range from 15·3 per 1,000 in that of Belfast, and 8·3 in that of Aldershot, to ·2 in the Woolwich district, and ·6 in the Channel Islands. In the previous year the highest admission rate was in the Channel Islands, being followed by that in the Belfast district; in Woolwich the ratio was *nil*. Among the admissions were 2 cases of cerebro spinal fever, both of which terminated fatally. One of the cases occurred at Woolwich, and the other at Manchester. The remaining admissions were all due to simple continued fever or febricula.

Dysentery.—There were 66 admissions and 4 deaths, including that of a man absent from his corps, being in the ratios of ·6 and ·04 per 1,000 respectively. The admission rate is slightly below the previous year's rate and the average rate of the preceding five years. In England and Wales 57 cases and all the deaths occurred, making the ratios ·8 and ·06 per 1,000 respectively; in Ireland there were 9 cases, or ·4 per 1,000, and in Scotland there was no occurrence of the disease. In addition to North Britain, no cases occurred in the Home, Belfast, or Curragh districts, but all the remaining districts show some admissions, the ratios varying from 2·8 per 1,000 in the Western district to ·2 in the Thames district. In the previous year the highest admission rate was in the Southern district. The fatal cases were one at York, one at Gosport, and two in London.

Influenza, which had been epidemic throughout the Kingdom during the first half of the preceding year, again became prevalent in an epidemic form in the year under report though not to so great an extent. The disease began to be observed among the troops early in April and gradually increased, through-

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out May and June it was very prevalent, after which it declined throughout July. In November the disease again showed itself, and was somewhat prevalent at certain stations, but gradually diminished towards the close of the year. The total number of admissions was 1,913 and 3 deaths were recorded from this disease. The ratio of admissions for influenza, therefore, in the United Kingdom was 19·3 per 1,000, as compared with 65·7 in 1890. Taking the three great divisions of the Kingdom separately, the admission ratio for England and Wales was 23·0 per 1,000, dependent on 1,624 admissions, that for Scotland 18·4 per 1,000 dependent on 71 admissions, and that for Ireland 8·7 per 1,000, dependent on 218 admissions. In the preceding year the three corresponding ratios were 67·7, 24·5, and 66·4 per 1,000 respectively. Every district was affected with the disease, though some only to a very limited extent. The district showing the highest admission rate was Woolwich, 46·9 per 1,000, this was followed by 38·2 in the South-eastern district, 34·4 in the North-eastern district, 33·6 in the Home district, 25·9 in the Belfast district, 23·3 in the Western district, 22·9 in the North-western district, 18·4 in the North British district, 17·9 in the Southern district, 14·7 in Aldershot, 9·3 in the Cork district, 6·5 in the Eastern district, 5·2 in the Dublin district, 2·2 in the Channel Islands, 1·3 in the Thames district, and ·2 at the Curragh. Compared with corresponding ratios in the previous year all the districts but three show a decrease in admission rate, most of them to a considerable extent, especially the Eastern, Home, and Dublin districts, where the disease was most prevalent in the preceding year; the three districts showing an increase of admission rate, the North-eastern, North-western, and Belfast districts, are those which were least affected by the epidemic in 1890. The number of stations from which the disease was returned was 73, those showing the greatest number of cases being Woolwich 274, Aldershot 207, Shorncliffe 194, London 154, Portsmouth 108, Belfast 81, York 73, Canterbury 67, Tregantle 65, Devonport 58, &c. The majority of the cases were mild, but there were many, more serious in character, in which complications occurred, and which were followed by protracted convalescence. The three deaths returned as due directly to influenza were two at Exeter and one in London. Other diseases of the first sub-group caused 79 admissions, or ·8 per 1,000, as compared with ·9 in the previous year. Two of the admissions were for diphtheria, one of which occurred at Aldershot and the other at Ipswich. The remaining admissions were due to mumps, of which 67 cases occurred in England, 2 in Scotland, and 8 in Ireland.

Malarial Fevers caused 761 admissions and 3 deaths, being in the ratios of 7·7 and ·03 per 1,000 respectively. The admission ratio is higher than that in the previous year by ·7 and than the average ratio for the preceding five years by 2·0. Taking England and Wales alone there were 678 admissions and 2 deaths, equal to ratios of 9·6 and ·03 per 1,000, the former showing an increase of ·7 on the last year's rate and one of 2·6 on the average rate. Scotland shows only 7 admissions, or 1·8 per 1,000, slightly below the previous year's rate, but both are below the average. The admissions in Ireland were 76 in number and there was one death. The rate of admission was 3·0 per 1,000, an increase of ·7 on the rate in 1890 and of ·5 on the average rate. The greatest prevalence of malarial disease in any district was, as was also the case in the previous year, in the Eastern district, the admission rate being 32·7 per 1,000, as compared with 35·2 in 1890, the ratio next in order was 19·2 in the South-eastern district, followed by 12·0 in the Western district; the lowest ratio was 1·1 per 1,000 in the Channel Islands, the next above being 1·5 at Aldershot and 1·8 in the Curragh and also in North Britain. In the preceding year the Home district gave the lowest rate of admission. Of the cases treated 711 are returned as ague, 20 as malarial cachexia, and 30 as remittent fever, one of which occurred in Ireland and the remainder in England. The deaths were 2 from remittent fever, one at Sandown and the other at Kinsale, and 1 from ague at York.

Septic Diseases were the cause of 144 admissions and 6 deaths, including that of a man absent from his corps. The admission ratio, therefore, was 1·4 and the death rate ·06 per 1,000. In the preceding year the corresponding ratios were 2·3 and ·06, and the average rates for the previous five years were 2·4 and ·08 per 1,000 respectively. The admissions in England and Wales were 110 in number, and the deaths 5. The admission rate, 1·5 per 1,000,

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shows a decline of ·9 from the previous year, and is below the quinquennial average rate by 1·0. The death rate, ·07 per 1,000, is also lower in these comparisons by ·01 and ·02 respectively. In Scotland there were 7 admissions, equal to 1·8 per 1,000, as compared with 2·1 in the previous year, and with 3·6 the five-yearly average rate. The admissions in Ireland numbered 27, being in the ratio of 1·1 per 1,000, a decline of ·8 from the rate in 1890, and from the average rate. One death occurred as compared with two in the previous year. All the admissions but three were caused by erysipelas. This disease occurred in every district except the Curragh, and the number of stations at which it appeared was 50; of these Aldershot showed 29 admissions, London 20, and Woolwich 14; but in the remaining stations the admissions did not go beyond single numbers. There were 5 deaths from erysipelas, two in London, and one at Aldershot, Devizes, and Warley respectively. Pyæmia caused 2 admissions, one at Dublin, which terminated fatally, and the other at Newry, and an admission for phagedæna is reported from York. *United Kingdom.*

Venereal Diseases.—Under the head of *primary syphilis* 6,263 admissions are returned, being in the ratio of 63·1 per 1,000, which is below the corresponding rate in the previous year by 6·0, and below the average ratio for the preceding five years by 8·6. The number of men constantly sick with this affection was 548·92, equal to a ratio of 5·53 per 1,000, a decline of ·93 from the rate in the previous year, and of 1·04 from the average rate of five years. In England and Wales alone the admission rate is found to have been 71·4, and the constantly sick rate 6·29 per 1,000, which are lower than similar rates in the previous year by 4·1 and ·75 respectively, and than the quinquennial average rates by 5·0 and ·76. In Scotland the admission ratio was 24·9 per 1,000, an increase of 4·6 on the rate in the previous year, but below the five years' average rate by 9·5. The ratio constantly sick was 1·86 per 1,000, a decline of ·11 from the last year's rate, and of ·93 from the average rate. In Ireland the ratio of admission was 45·5, and that of constantly sick 3·93 per 1,000, which are lower than the corresponding ratios in the preceding year by 12·8 and 1·55 respectively, and below the average ratios for five years by 18·5 and by 1·82. Among the different districts the highest admission rate, 107·8 per 1,000, occurred in Aldershot, and the next, 92·9, in the Home district. In the previous year also these two districts gave the highest ratios, but their relative positions were reversed. The ratio third in order was 78·2 in the Eastern district, followed by 76·0 in the Southern district; the lowest admission rate was 18·6 per 1,000 in the Cork district; the next above, 24·9, in North Britain, and 28·2 in the North-western district. In the preceding year the North British, Channel Islands, and Cork districts gave the lowest ratios. Compared with similar rates in 1890 there was an increase in the ratios of five districts and a decrease in the remainder.

Simple venereal ulcer caused 1,392 admissions, and there were 96·98 men constantly sick, being in the ratios of 14·0 and ·97 per 1,000 as compared with 16·5 and 1·15 in the previous year. In England and Wales the admissions were 960, and the constantly sick 67·37. The ratios, therefore, were 13·6 and ·96 per 1,000, lower by 2·8 and ·17 than in 1890. In Scotland the admissions numbered 74, and the constantly sick 4·22, equal to ratios of 19·2 and 1·10 per 1,000, which are lower than in the preceding year by 3·0 and ·30 respectively. In Ireland there were 358 admissions and 25·39 constantly sick, making the ratios 14·3 and 1·02 per 1,000, showing decrease from the rates in 1890 by 1·8 and ·17 respectively. Adding the sickness from this disease to that from primary syphilis the admission rate for primary venereal sores in the United Kingdom was 77·1, and the constantly sick rate 6·50 per 1,000, which are lower than the corresponding rates in the previous year by 8·6 and 1·11, and lower than the average ratios for the preceding five years by 20·2 and 1·89 respectively. In England and Wales alone the admission ratio was 85·0 and the constantly sick rate 7·25 per 1,000, which show a decrease from similar rates in the previous year of 6·9 in the case of the admission and of ·91 in that of the constantly sick rate, and compared with five years' average rates are lower by 18·3 and 1·77 respectively. In Scotland the ratios of admission and constantly sick were 44·1 and 2·96 per 1,000 respectively, the former being higher than 1890 by 1·7, but the latter lower by ·41, while both are lower than the quinquennial average rates by 16·6 and 1·45 respectively. In

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Ireland the admission ratio was 59·8 per 1,000, lower than in the previous year by 1·5 and than the average rate of five years by 26·0, and the constantly sick rate was 4·95 per 1,000, also lower in both these comparisons by 1·73 and 2·24 respectively. The highest admission ratio in any district was 110·5 per 1,000 in Aldershot, next 96·8 in the Home district, and 93·1 in the Channel Islands; the lowest ratio was 34·8 in the Cork district; the next above being 44·1 in North Britain, and 53·1 in the North-western district. Compared with similar ratios in the previous year the rates in the Channel Islands and the Eastern and North British districts have increased, but a decrease is observed in the rates of all the remaining districts.

Secondary Syphilis.—The admissions numbered 3,493, there were 4 deaths, and 326·54 men were constantly inefficient from this cause. The ratio of admission was 35·2 and that of constantly sick 3·29 per 1,000, lower than the corresponding ratios in the previous year by 2·1 and ·20, as well as below the average ratios of five years by 2·7 and ·10 respectively. Taking England and Wales alone the admission ratio was 38·6 and the constantly sick rate 3·59 per 1,000; these are also rather lower than the similar ratios in the previous year and than the quinquennial average rates, in the former by ·5 and ·11, and in the latter by 1·5 and ·07 respectively. In Scotland the ratio of admission was 30·6 per 1,000, being in excess of that in the preceding year by 3·9, but below the five years' average rate by the same amount; the constantly sick rate was 2·36 per 1,000, higher than in 1890 by ·43, but below the average rate by ·13. In Ireland the admission rate equalled 26·2 and the constantly sick rate 2·59 per 1,000, which are below the last year's rates by 7·4 and ·52, and below the average rates by 6·2 and ·18 respectively. The highest admission rate in any district was 79·1 per 1,000 in the Channel Islands; then came 52·8 in the Southern district, and 47·4 in Aldershot; the lowest ratio was 16·8 at the Curragh; the next above, 17·3 in the Thames district, and 19·4 in the Cork district. In the previous year the Eastern district gave the highest rate and the Cork district the lowest. Compared with corresponding rates in 1890 an increase of admission rate occurred in the South-eastern, Aldershot, Channel Islands, and North British districts, but a decrease is observed in the remainder.

Gonorrhœa.—The admissions returned were 8,455 in number, and 551·38 men were constantly sick with this complaint. The admission ratio, 85·1 per 1,000, was below the corresponding rate in the previous year by 4·3, and below the average rate of the preceding five years by 12·9; the ratio constantly sick, 5·55 per 1,000, was also lower in both these comparisons by ·42 and ·77 respectively. In England and Wales the admission rate was 89·2 and the constantly sick rate 5·76 per 1,000, which show a decrease of 3·5 and ·35 respectively as compared with similar ratios in the previous year; they are also lower than the five years' average ratios by 10·5 and 77 respectively. In Scotland the admission and constantly sick rates were 61·8 and 3·25 per 1,000, as compared with 60·0 and 2·93 in the preceding year, and with 74·5 and 3·56 the average ratios. In Ireland the admission ratio, 77·2 per 1,000, is lower than that in 1890 by 6·9 and than the five years' average rate by 19·2; the constantly sick rate, 5·31 per 1,000, is also lower by ·70 and ·83 respectively. As to the districts the highest admission rate was 110·9 per 1,000 in the Eastern district, next 109·8 in the Dublin district, and 107·8 in the Channel Islands; the lowest ratios were 50·9 at the Curragh, 55·3 in the Thames district, and 61·8 in the Cork district. In the previous year the Dublin district gave the highest rate and the Curragh the lowest. Compared with similar ratios for the previous year an increase has occurred in the admission rate in six districts and a decrease in the remainder, the most marked instance of the former being 18·2 in the Eastern district, and of the latter 23·9 in the Southern.

If the sickness from all forms of venereal disease is taken together, the number of admissions was 19,603, and that of men constantly suffering from these affections 1523·82. The total ratio of admission was 197·4 per 1,000, which is below the corresponding ratio in the previous year by 15·0, and is lower than the average ratio for the preceding five years by 35·9. The total ratio of constant inefficiency on account of these diseases was 15·34 per 1,000, being lower than the ratio in 1890 by 1·73, and than the quinquennial average rate by 2·77. In England and Wales the admission rate for venereal diseases

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was 212·8, and the constantly sick rate 16·60 per 1,000. Compared with corresponding results for the preceding year there is a decline of 10·9 in the admission rate and one of 1·37 in the constantly sick rate, and compared with quinquennial average rates there is a decline of 30·4 in the former and one of 2·61 in the latter. In Scotland the admission rate amounted to 136·5, and the constantly sick rate to 8·56 per 1,000, which are in excess of the corresponding ratios in the previous year by 7·3 and ·33, but below the average ratios of five years by 33·3 and 1·90 respectively. In Ireland the admission ratio equalled 163·2 per 1,000, being lower by 28·9 than in the previous year, and by 51·5 than the five years' average rate; the constantly sick rate, 12·85, is also lower in these comparisons by 2·95 and 3·26 respectively. The greatest prevalence of venereal disease in any district was in the Channel Islands, where the admission ratio amounted to 280·0 per 1,000, this was followed by Aldershot with 255·0, the Home district 242·8, Eastern 231·8, Dublin 228·8, Southern 220·2, Woolwich 206·3, Western 194·8, South-eastern 185·3, North-eastern 183·3, Belfast 178·2, North-western 156·4, North British 136·5, Thames 134·3, the Curragh 132·7, and the Cork district 116·0 per 1,000, In the previous year the greatest prevalence was in the Dublin district, and then in the Home district, and the least in North Britain and then in the Cork district. Compared with corresponding results in the previous year the admission ratio has increased in the Channel Islands by 77·6, in the South-eastern district by 10·3, in North Britain by 7·4, in the Eastern district by 5·5, at Aldershot by 4·4, and in the North-eastern district by 2·3, while it has decreased in the Thames district by 49·1, in the Southern by 43·1, in the Dublin district by 36·1, at Woolwich by 32·4, at the Curragh by 30·3, in the Home district by 21·9, in the Cork district by 19·4, in the Western district by 18·1, in the Belfast district by 17·7, and in the North-western district by 7·3 per 1,000. *United Kingdom.*

Parasitic Diseases.—The admissions under this head were 26 in number as compared with 46 in the preceding year. With one exception all the admissions were for tænia solium.

In the next sub-group of diseases 11 admissions and 1 death are shown under the head of *scurvy*. In the previous year 7 admissions were returned. Of the cases 6 occurred in England and 5 in Ireland. The fatal case was returned from the Curragh.

Alcoholism caused 238 admissions and 2 deaths; the admission ratio, 2·4 per 1,000, is below the last year's rate by ·3 and below the average rate by ·7. In England and Wales the admission ratio was 2·6, in Scotland 1·8, and in Ireland 1·8 per 1,000; in the preceding year the corresponding ratios were 3·0, 4·5, and 1·6 respectively. Among the cases treated were 16 of delirium tremens. Of the deaths one was due to alcoholism and the other to delirium tremens.

In the group of diseases comprising *debility, malformations, &c.*, 744 admissions are recorded, equal to a ratio of 7·5 per 1,000, which is lower by ·5 than in the previous year, but is the same as the average rate of five years. In England and Wales the ratio was 7·2, in Scotland 7·8, and in Ireland 8·3 per 1,000; in the preceding year the corresponding rates were 8·1, 4·8, and 8·1 respectively. With the exception of 10 cases of malformation all the admissions were returned under the head of debility.

Rheumatism.—The number of admissions was 3,702, and there were 5 deaths, including that of a man absent from his corps. The admission ratio, 37·3 per 1,000, differs only fractionally from the corresponding ratio in the previous year and from the average rate of five years. The admission ratio in England and Wales was 39·0 per 1,000, being below the last year's rate by 1·5 and the average rate by 1·2; in Scotland the rate was 26·2 per 1,000, a decline of 4·5 from that in 1890, and of 3·0 from the average rate; in Ireland the ratio, 34·2 per 1,000, shows an increase of 4·1 on the previous year's rate and of 1·7 on the average rate. The highest admission rate in any district was 50·9 per 1,000 in the Western district, next, 49·9, in the Eastern district, and 44·6 in Aldershot; the lowest ratio was 24·8 in the Channel Islands, 26·2 in North Britain, and 26·5 in the North-western district. In the previous year the highest rate was in the Eastern district and the lowest in the Belfast district. Among the total number of cases treated there were 318·

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of rheumatic fever, of which 240 happened in England and Wales, 3 in Scotland, and 75 in Ireland. The deaths were all due to rheumatic fever, and occurred as follows:—One at Colchester, Devonport, Caterham, and Birr respectively, also one of a man on furlough.

Tubercular Diseases.—The number of admissions returned was 323 and of deaths 77, including those of 9 men absent from their corps. The admission ratio was 3·2 and the death rate ·76 per 1,000, as compared with 3·9 and 1·02 in the previous year, and with 3·7 and 1·05, the average ratios for the preceding five years. In England and Wales alone the ratios were 3·3 and ·73 per 1,000, which are below the previous year's rate by ·7 and ·34, and below the average rates by ·6 and ·37 respectively. In Scotland the admission rate was 2·3 per 1,000, a decrease of 1·2 from the rate in 1890 and of ·9 from the average rate. The death rate, ·76 per 1,000, is lower in both these comparisons by ·29 and ·05 respectively. In Ireland the admission and death ratios were 3·2 and ·77 per 1,000 respectively, which are lower than the last year's rates by ·3 and ·13, and below average rates by ·1 and ·15. Of the districts the Southern shows the highest ratio of prevalence, 5·7 per 1,000, and the Eastern and Cork districts, the next, each 4·7; the lowest ratio was 1·7 in the North-eastern district, the next above 2·1 in the Curragh and 2·2 in the Dublin district. In the preceding year the highest admission rate was in the Channel Islands and the lowest in the Western district. Of the deaths among men serving with their corps 14 occurred in the Southern district, 13 in the Cork district, 6 in the Eastern district, 6 in the Thames district, 4 at Aldershot, 4 in the Dublin district, 3 each in the Western, South-eastern, Home, and Woolwich districts, 2 each in the North-eastern, North-western, and North British districts, and 1 at the Curragh. Of deaths among men detached from their corps six occurred in England, two in Ireland, and one in Scotland. Of the total number of admissions and deaths, 305 of the former and 71 of the latter were due to tubercular disease of the lungs, the remainder to tubercle affecting other parts of the body.

Other diseases of this group caused 527 admissions and 12 deaths. The ratios were therefore 5·3 and ·12 per 1,000, respectively, the former being somewhat in excess of the corresponding rate in the previous year, but there is no change in the death rate. In England the admission rate was 5·7, in Scotland 3·6, and Ireland 4·3 per 1,000. Non-malignant new growths, principally papilloma, caused as many as 338 of the admissions, and among the remainder were 111 cases of anæmia, 45 of scrofula, 11 of malignant disease, and 8 of diabetes. The deaths comprised five from cancer, three from diabetes, two from purpura, one from fibroma, and one from anæmia. The deaths from cancer were returned from Aldershot, Londonderry, Chatham, Pembroke Dock, and Preston respectively, and the deaths from purpura were one at Dover and the other at Canterbury.

Local Diseases.—*Diseases of the Nervous System.*—816 admissions and 26 deaths are recorded under this head, being in the ratios of 8·2 and ·26 per 1,000, which are below the corresponding ratios in the preceding year by 1·1 and ·09, and below the average ratios of the previous five years by 1·0 and ·13 per 1,000 respectively. In England and Wales alone the ratio of admission was 8·5, and the ratio of mortality ·28 per 1,000 below the rates in the preceding year by 1·0 and ·06, and below the five years' average rates by ·9 and ·12 respectively. In Scotland the admission rate was 7·0, as compared with 11·0 in the previous year, and with 8·5 the average rate; there was no mortality. In Ireland the admission rate was 7·6 per 1,000, a decline of 1·2 from the last year's rate and below the average rate by 1·2. The death rate, ·23 per 1,000, has declined by ·12 and ·13 in these comparisons. The greatest prevalence of nervous affections in any district was in the South-eastern, the ratio being 12·0 per 1,000. This was followed by 9·4 at Aldershot and 9·3 in the Western and Home districts; the least prevalence was in the Woolwich district, the rate being 4·5, then in the North-western district 5·0, and at the Curragh 5·5 per 1,000. In the preceding year also the highest and lowest admission rates were found in the South-eastern and Woolwich districts respectively. Mental disease caused 124 admissions, or 1·2 per 1,000, as compared with 1·3 in the previous year and 1·5 the average rate of five years. For the three great divisions of the kingdom the ratios were 1·1, 2·1, and 1·5

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respectively; in the previous year the rate in England was 1·2, in Scotland 1·9, and in Ireland 1·7. The principal causes of admission were neuralgia 367 cases and epilepsy 132 cases, and among the remainder were 21 of inflammation of the brain or its membranes, 49 of paralysis, and 5 of apoplexy. The cases of mental disease comprised 33 of mania, 34 of melancholia, 34 of dementia, 16 of idiocy, and 7 of other forms of insanity. The deaths included 9 of inflammation of the brain or its membranes, 3 of inflammation of spinal cord, 2 of abscess of the brain, 7 of apoplexy, and one of softening of brain, paralysis, epilepsy, tetanus, and mania respectively. *United Kingdom.*

Diseases of the Eye.—The admissions in the United Kingdom numbered 1,051, being in the ratio of 10·6 per 1,000, which is lower than the corresponding ratio in 1890 by 1·2, and than the average rate of five years by 1·9. In England and Wales only the admission ratio was also 10·6 per 1,000, and is lower than the rate in the previous year, and than the average rate by ·4 and 2·0 respectively. In Scotland the ratio, 8·3 per 1,000, shows a decline of 3·7 from the last year's rate and one of 2·5 from the average rate. In Ireland the admission rate reached 11·0 per 1,000, but was below the rate in 1890 by 2·8, and below the average rate by 1·8. In the districts the highest admission rate was 17·2 per 1,000 in the Eastern, followed by 14·5 in the South-eastern, and 14·0 in the Cork district; the lowest rate was 6·7 in the North-western district, the next above being 7·5 in the Woolwich district, and 7·8 in the Thames district. Of the admissions as many as 675 were for simple conjunctivitis and 96 for iritis, the remaining 280 being for various causes.

Diseases of other Organs of Special Senses.—826 admissions and 2 deaths are returned, being in the ratios of 8·3 and ·02 per 1,000. The admission rate is higher than that in the preceding year by ·2, and than the average rate of the previous five years by 1·2. In England and Wales the admission ratio, 8·7 per 1,000, was very slightly in excess of that in 1890, but above the average rate by 1·3. In Scotland the ratio, 6·0 per 1,000, differs in these comparisons by a decrease of ·7 and ·1 respectively. In Ireland the ratio was 7·5 per 1,000, an increase of ·7 on the last year's rate, and of 1·1 on the average rate. The greatest ratio of prevalence in any district was 12·7 per 1,000, in Aldershot, the next 11·4, in the Western, and 9·8 in the South-eastern; the least was 4·5 in the Belfast district, and next above were 4·9 and 5·4 in the North-eastern and North-western respectively. 781 of the admissions were for diseases of the ear, principally inflammation of the external meatus, and there were 45 admissions for nasal affections. There were 2 deaths from aural disease.

Diseases of the Circulatory System.—The admissions numbered 965, and the deaths 36, including that of a man detached from his corps. The admission and mortality ratios, 9·7 and ·36 per 1,000, are in excess of those in the previous year by ·9 and ·02, but as compared with the quinquennial average rates, the admission ratio shows no change, and the death rate a decline of ·7. In England and Wales the admission and death rates were 10·1 and ·39 per 1,000, which are higher than the corresponding ratios in 1890 by 1·8 and ·03, but lower than the average rates of five years by ·2 and ·04 respectively. In Scotland the admission rate was 7·5, and the death rate ·25 per 1,000, as compared with 18·7 and ·53 in the previous year, and with 10·8 and ·54 the average rates. In Ireland the ratio of admission was 9·1 per 1,000, an increase of ·7 on the last year's rate, and of 1·0 on the average rate. The death rate, ·27 per 1,000, is the same as in the previous year, but below the average by ·11. In the districts the greatest prevalence of these diseases was in the Eastern, the ratio being 14·7 per 1,000; the next two rates were 14·4 and 14·3 in the South-eastern district and Aldershot respectively; the lowest ratios were 4·5 in the Channel Isles, 4·6 in Woolwich, and 4·7 in the North-western district. The most frequent causes of admission were palpitation 446 cases, valvular disease of the heart 257, and varicose veins 181 cases, and among the remainder were 17 cases of pericarditis, and 10 of aneurysm. The deaths comprised 13 of valvular disease of the heart, 8 of aneurysm of the aorta, 5 of syncope, 4 of pericarditis, 2 of fatty degeneration of the heart, and 1 of hypertrophy of the heart, dilatation of the heart, angina pectoris, and phlebitis respectively.

Diseases of the Respiratory System caused 7,855 admissions and 155 deaths, including 11 of men absent from their corps. The admission ratio, therefore,

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was 79·1 per 1,000, which is above the corresponding rate in the previous year by 6·6, and above the average ratio of the preceding five years by 13·5. The mortality ratio was 1·53 per 1,000, a decline of ·25 from the last year's rate, but above the average rate by ·13. In England and Wales alone the admission and mortality ratios for respiratory affections were 81·1 and 1·53 per 1,000, the former being higher than the last year's rate by 6·0, and than the five years' average rate by 11·7, while the latter is lower than in 1890 by ·45, but above the average rate by ·05. In Scotland the admission rate was 61·7 and the death rate 2·02 per 1,000, as compared with 71·8 and 1·58 in the preceding year, and with 61·4 and 1·85 the average ratios of five years. In Ireland the ratio of admission was 76·1, and that of mortality 1·47 per 1,000, being in excess of the similar ratios in the previous year by 10·7 and ·26, and than the quinquennial average rates by 20·8 and ·37 respectively. Among the different districts the highest ratio of prevalence of respiratory diseases was 112·7 per 1,000 in the South-eastern district, the next being 108·0 in the Home district, and 93·0 in the Eastern district; the lowest ratio was 33·3 in the Channel Islands, the next above being 50·2 in the Thames district, and 60·2 in the Southern district. In the preceding year also the greatest prevalence of these affections was in the South-eastern district. As usual more than three-fourths of the total number of admissions were caused by bronchitic affections. Among the remainder there were 856 cases of pneumonia, 347 of pleurisy, 178 of laryngitis, 65 of pneumonic phthisis, and 37 of asthma. The deaths were 114 from pneumonia, 14 from pneumonic phthisis, 10 from bronchitis, 9 from pleurisy, 2 from pulmonary hæmorrhage, and 1 from asthma, gangrene of lung, empyema, œdema glottidis, pulmonary apoplexy, and passive congestion of the lungs.

Diseases of the Digestive System were the cause of as many as 11,323 admissions and 35 deaths, inclusive of 5 of men detached from their corps. The admission ratio, therefore, was 114·0 per 1,000, an increase of 6·6 on the corresponding ratio in the preceding year, and of 13·5 on the average rate of the previous five years. The mortality rate, ·34 per 1,000, is higher than the previous year's rate by ·06, but below the average rate by ·03. In England and Wales the admission rate was 117·8, and the death rate ·34 per 1,000, the former being higher than that in the previous year by 4·0, and than the five years' average rate by 12·3, and the latter is higher than in 1890 by ·04, but below the average rate by ·07. In Scotland the admission rate was 92·9, and the death rate 50 per 1,000, as compared with 110·0 and ·26 in the preceding year and with 93·5 and ·33 the average rates. In Ireland the ratio of admission was 106·7, and the death rate ·35 per 1,000, which are higher than the corresponding ratios in the previous year by 18·2 and ·16, and than the five years' average rates by 19·3 and ·09 respectively. Among the districts the highest admission rate was 154·3 per 1,000, at Aldershot, the next, 143·4, in the Eastern district, and 140·7 in the South-eastern district; the lowest rate was 82·4 in the Channel Islands, the next above being 82·9 in the Thames district, and 84·6 in the North-eastern district. In the previous year also Aldershot had the highest prevalence of these diseases. Of the admissions just over two-thirds of the total number were for affections of the mouth and throat, and among other diseases the most frequent causes of admission were dyspepsia 1,506 cases, diarrhœa 492, colic 383, hernia 322, and hepatic diseases 434 cases, including 6 of abscess of the liver. The deaths were 7 from peritonitis, 7 from abscess of the liver, 6 from intestinal obstruction, 3 from cirrhosis of liver, 3 from yellow atrophy of the liver, 3 from other hepatic diseases, 3 from enteritis, and one from typhlitis, quinsy, and diarrhœa respectively.

Diseases of the Lymphatic and Glandular System.—1,383 admissions are recorded, equal to a ratio of 13·9 per 1,000, which is lower than the corresponding rate in the previous year by 1·6, and below the average rate of the preceding five years by 4·9. In England and Wales the admission ratio was 14·5 per 1,000, a decline of 2·0 from the last year's rate and of 5·1 from the average rate. In Scotland the rate was 9·9 per 1,000, an increase of 3·5 on the rate in 1890, but slightly below the average. In Ireland the admission ratio equalled 13·0 per 1,000, a decline of ·8 from the last year and below the average by 4·8. The greatest prevalence of these affections in any district was in the Western, the rate being 20·5 per 1,000, followed by 19·5 at Aldershot,

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and 19·1 in the Dublin district; the least prevalence was in the North-western district, the rate being 6·7, the next above being 7·5 in the Thames district, and 8·5 in the Belfast district. The greater majority of the admissions were for inflammation of glands. Two deaths from Addison's disease are returned under this heading. *United Kingdom.*

Diseases of the Urinary System.—The number of admissions was 216, and of deaths, including 3 of men absent from their corps, 18. The admission rate was 2·2 and the death rate ·18 per 1,000, the former being the same as the five years' average rate, but slightly above that of the previous year, and the latter being slightly higher in both these comparisons. In England and Wales the admission and death rates were 2·4 and ·20 per 1,000, being rather higher than the corresponding rates in 1890 and than the average rates. In Scotland the ratio of admission was 2·1 per 1,000, below the last year's rate by 1·1, and the average rate by ·5; there was no mortality. In Ireland the admission rate was 1·5, and the death rate ·15 per 1,000, as compared with 2·1 and ·08 in the previous year, and with 2·0 and ·15 average rates. In the districts the admission rate varied from 7·3 per 1,000 in the Channel Islands, and 2·9 in the South-eastern district to ·3 in North Britain, and ·5 in the North-western district. The principal causes of admission were incontinence of urine 97 cases, Bright's disease 33, and nephritis 30 cases. The deaths were 11 from Bright's disease, 5 from nephritis, 1 from pyelitis, and 1 from renal abscess.

Diseases of the Generative System.—Under this head as many as 2,665 admissions are returned, but of these 1,392 were cases of simple venereal ulcer. The admission ratio, 26·8 per 1,000, is lower than that in the previous year by 3·6 and below the average rate of five years by 16·9. In England and Wales the ratio was 25·9 per 1,000, a decline of 3·1 from the last year's rate and of 18·9 from the average rate; in Scotland the rate was 33·2 per 1,000, a decline of 3·4 and 9·4 respectively in these comparisons; and in Ireland the rate was 28·6 per 1,000, lower by 4·9 than in 1890, and by 12·1 than the average rate. In the districts the ratio of prevalence varied from 57·6 per 1,000 in the Western and 43·8 in the Dublin district to 11·3 at the Curragh and 14·2 in the Thames district. Omitting simple venereal ulcer the most frequent causes of admission were orchitis 510 cases, balanitis 465, and stricture of the urethra 117 cases.

Diseases of the Organs of Locomotion caused 746 admissions and 3 deaths. The admission ratio was 7·5 per 1,000, lower than in the previous year by ·3, but higher than the average rate of five years by ·5. In England and Wales the ratio was 6·7 per 1,000, a decline of ·6 from the ratio in 1890, though about the quinquennial average rate. In Scotland the ratio was 7·0 per 1,000, as compared with 13·3 in the previous year, and with 8·5 the average rate. In Ireland the ratio 9·7 per 1,000 is higher in both these comparisons, by 1·4 and 2·6 respectively. In the districts the highest admission ratios were 11·1 and 10·1 per 1,000 in the Dublin and Belfast districts; the lowest being 4·2 and 4·6 in the North-western and Western districts. The principal cause of admission was synovitis 486 cases, and among the remaining admissions were ostitis 66, and bursitis 40 cases. The deaths were 2 from spinal caries and 1 from ostitis.

Diseases of the Connective Tissue.—2,427 admissions are returned and 4 deaths. The admission rate was 24·4 per 1,000, above the last year's rate by 2·1 and above the quinquennial average rate by 1·7. In England and Wales the ratio 23·4 per 1,000 is higher than in 1890 by 1·9 and than the average rate by ·6; in Scotland the ratio was 36·3 per 1,000, as compared with 38·4 in the previous year and with 25·0 the average rate; in Ireland the ratio 25·6 per 1,000 is higher in both these comparisons by 3·5 and 3·4 respectively. The admission ratios in the districts varied from 36·3 per 1,000 in the Western and North British districts to 9·0 in the Channel Islands. More than half the admissions were cases of abscess, from which also the four deaths resulted.

Diseases of the Skin.—The number of admissions recorded was 7,598, equal to a ratio of 76·5 per 1,000, an increase of 6·3 on the previous year's rate, but lower than the five years' average rate by 2·2. In England and Wales the ratio was 76·7 per 1,000, an increase of 6·5 on the rate in 1890, but below the average rate by 3·4. Scotland gave a ratio of 81·5 per 1,000 as compared with 74·5

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in the preceding year and with 81·8 the average rate. Ireland shows a ratio of 75·3 per 1,000, being higher in both these comparisons by 5·9 and 1·0 respectively. In the districts the highest ratio of prevalence was 174·5 per 1,000 in the Channel Islands, the next 93·5 in the Eastern district, and 88·7 in the Southern; the lowest ratio was 51·2 at Woolwich, the next above being 56·0 in the Thames district and 57·6 in the Home district. Of the admissions over one-third were caused by scabies, and among the remainder boils, ulcers, eczema, whitlow, and ringworm caused the most numerous admissions, and in the above order.

Poisons.—The number of admissions recorded was 16 and there were 5 deaths; in the preceding year there were 8 admissions and 2 deaths. The admissions comprised four from poisoned wounds, all of which did well; two from poisoning by oxalic acid, two from poisoning by lead, one by opium, and one from ammonia liniment, all these cases were accidental and recovered; a case of alcoholic poisoning did well, as also a case caused by eating poisonous fish; there was one admission for poisoning by iodine liniment, this case was an attempt at suicide, the man recovered under treatment; there were two admissions for snake bite, one case recovered, but the other eventually proved fatal from the supervention of tetanus as previously alluded to; and there was one admission for accidental poisoning by chloroform vapour, administered for the performance of a surgical operation, the case terminated fatally. In addition to that just mentioned there were four other deaths, one accidental from poisoning by chlorodyne, and three suicidal from cyanide of potassium, hydrocyanic acid, and, it is believed, oxalic acid respectively.

Injuries.—The number of admissions amounted to 10,439 and there were 71 deaths. The admission ratio, therefore, was 105·1 and the mortality rate ·70 per 1,000, as compared with 100·4 and ·76 in the preceding year and with 97·7 and ·73 the average ratios for five years. In England and Wales alone the admission and mortality rates were 103·9 and ·79, in Scotland 115·7 and ·25, and in Ireland 107·0 and ·54 per 1,000 respectively. For general injuries alone there were 10 admissions and 37 deaths, including those of two men absent from their corps; in the previous year there were 13 admissions and 43 deaths. The admissions comprised three for burns or scalds, three for sunstroke, three for multiple injury, and one for asphyxia from submersion. The deaths were 27 from drowning, of which twenty-one were accidental the remainder being cases found drowned, 5 from multiple injury, of which four were accidental, chiefly from falls, and one was suicidal, 2 of asphyxia from plugging of the air passages, 1 from hanging, a case of suicide, and 1 from lightning stroke.

Local injuries caused 10,429 admissions and 34 deaths, including two of men absent from their corps; in the previous year there were 10,045 admissions and 35 deaths. The principal causes of admissions were, as usual, contusions, wounds, and sprains, over three-fourths of the total number being returned under these heads; among the remainder were 390 cases of fracture, 91 of dislocation, 36 of gunshot wounds, and 16 of concussion of the brain. Of the admissions for gunshot wounds the majority were cases occurring accidentally at practice, and not many were serious; there were, however, three cases of self-inflicted injury admitted, and one of homicidal intent. There were 19 deaths from gunshot wound, of these fifteen were suicidal, one was homicidal, and three were accidental, two at rifle practice and one of a man on furlough; there were 5 deaths from cut-throat, self-inflicted, 3 deaths from fracture of the spine, and one from contusion of the spine from accidental falls, 2 deaths from fracture of the skull, also resulting from falls, 1 death from contusion of the skull and cerebral hæmorrhage, the effects of a blow, but how received there was no evidence to show, 1 death from rupture of the arch of the aorta resulting from a fall from a window, 1 death from rupture of the abdominal aorta, also the result of a fall, and 1 from contusion of abdomen with rupture of viscera caused by a kick from a horse.

In all there were 25 suicides during the year among the troops serving in the United Kingdom, as compared with 21 in the preceding year and with 20 the average number for the preceding ten years. The methods by which the suicides were committed were gunshot 15 cases, cut-throat 5, poison 3, hanging 1, and multiple injury, the man having placed himself to be run over by a railway train. As to the causes of the suicides no motive was ascertained

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in twenty cases, two are said to have been due to mental depression, one to shame at having been placed under arrest for theft, one to the study of atheistic literature, and one to domestic and regimental trouble. The verdicts returned at the coroners' inquests were in twenty-three instances temporary insanity, in one suicide while in a desponding state of mind, and in one instance a verdict of suicide was recorded. The average age of the suicides was 29 years, and their average service nearly 10 years. The number of attempts at suicide is recorded as five; the methods were in three instances cut-throat, one of the men having previously taken iodine liniment as a poison, and there were two cases of gunshot wound. For two of the attempts no motive was assigned, but of the remainder one was due to religious despondency, one to mental depression aggravated by drink, and the third was probably due to drink. Three of the cases were eventually discharged the service on account of mental disease. *United Kingdom.*

Among the numerous surgical operations which were performed during the year the following may be alluded to:—Two amputations of the forearm, one on account of extensive disease of the carpus and metacarpus, and the other on account of compound fracture of the bones of the wrist and hand; an amputation at the ankle joint on account of caries of the tarsus, also two amputations of thumbs and several of fingers or toes; all the foregoing gave satisfactory results. There was an excision of the right elbow joint on account of scrofulous disease, one of a toe joint on account of deformity, and one of a metatarso-phalangeal joint on account of caries. There were three cases of excisions of the eye-ball, which did well, one being necessitated by contusion of the eye, another by syphilitic disease, and the third by gunshot injury. A case of trephining the skull on account of cerebral abscess terminated fatally. Three cases of tracheotomy are reported, of which two were successful, but the other ended fatally. A case of laryngotomy on account of œdema of the glottis also proved fatal. Two cases of removal of sequestra, one of excision of rib on account of empyema, and one case of resection of tibia on account of ununited fracture, all did well; also a case of extraction of foreign body from gunshot wound. Among nine operations of tapping or incision of the pleura on account of pleurisy or empyema, there were two cases in which fatal results occurred, but the remainder proved to be satisfactory. A case of tapping the abdomen on account of scirrhus of the peritoneum proved fatal, and also a case of abdominal section on account of intestinal obstruction. There was one operation for strangulated hernia, and one for an omental hernia, which gave successful results; also two for the radical cure of hernia, one of which was successful, but in the other case invaliding was necessary. There were five cases of removal of the testicle, in three instances on account of tubercular disease, in one on account of scrofula, and in one on account of syphilitic disease, perineal section was performed in a case of stricture of the urethra and extravasation of urine, lithotrity was undertaken for the removal of vesical calculus, and there was an operation for removal of a renal calculus; in all these the results were satisfactory. In addition to the above there were various operations performed for the removal of non-malignant tumours, for varicose veins, varicocele, hydrocele, fistula in ano, and others of a minor character, in all of which successful results were obtained.

Invaliding.—There were 1,466 men discharged the service in the course of the year as medically unfit for further service, being in the ratio of 14·51 per 1,000, which is below the corresponding ratio in the previous year by 2·21, and below the average rate for the preceding ten years by 4·92. Taking England and Wales alone there were 1,108 men discharged as invalids, the ratio in this case being 15·56 per 1,000, which is lower than the ratio in 1890 by 1·21, and lower than the average rate of the five years preceding by 1·26. In Scotland there were 42 men invalided, equal to 10·59 per 1,000, as compared with 29·44 in the previous year, and with 21·00 the average rate. In Ireland the number of men discharged by invaliding was 316, equal to a ratio of 12·22 per 1,000, a decline of 2·48 from the last year's rate, and of 1·45 from the quinquennial average rate.

Among the causes of invaliding the following are specially noticeable:—The most frequent causes, as was the case in previous years, were diseases of the circulatory system, 322 men being invalided, equal to a ratio of 3·19 per 1,000, which differs from that of the preceding year only by a decline of ·06. Diseases of the nervous system were next in frequency as causes of invaliding,

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195 men having been discharged on this account, the ratio was 1·93 per 1,000, an increase of ·04 on the last year's rate; among the cases were 90 of mental disease, or ·89 per 1,000, as compared with 83 cases, or ·81 per 1,000, in the preceding year. Tubercular diseases came next in order, 183 cases of invaliding being returned, or 1·81 per 1,000, which, however, is lower by ·30 than the corresponding rate in the preceding year. The next ratio of invaliding was ·90 per 1,000, due to 91 cases of diseases of the digestive system; the rate differs only by a decrease of ·03 from the last year's rate. Diseases of the organs of locomotion caused the invaliding of 81 men, equal to a ratio of ·80 per 1,000, a decline of ·36. Diseases of the respiratory system gave an invaliding rate of ·75 per 1,000, dependent on the discharge of 76 men, and below the last year's rate by ·22. The next ratio of invaliding was ·72 per 1,000, 73 men having been found unfit on account of constitutional syphilis; the same ratio is found in cases of disease of organs of special senses other than the eye; in the previous year syphilitic affections showed an invaliding ratio of ·77, and aural and nasal diseases one of ·82 per 1,000. Rheumatic affections caused the invaliding of 70 men, or ·69 per 1,000, a decline of ·10 from the previous year's rate, while 69 men, or ·68 per 1,000, were invalided for debility, the ratio showing a decrease of ·33. There were 59 men discharged as medically unfit from the results of injuries sustained, but the ratio, ·58 per 1,000, has declined by ·26 from the ratio in 1890. Ophthalmic affections gave an invaliding rate of ·51 per 1,000, a decline of ·17. The ratios of invaliding in other classes and orders of diseases are all small, and most of them rather below the corresponding ratios in the preceding year.

The ratio of invaliding among men in their first year of service from certain diseases has been compared with corresponding ratios among men invalided during all periods of service. Taking cardiac diseases first, it appears that the invaliding rate on this account was among men in their first year of service, equal to 2·65 per 1,000 of strength, and among men at all periods of service 2·53 per 1,000. In the returns for the preceding year the corresponding ratios were 2·35 and 2·68 per 1,000 respectively. The ratio of invaliding for epilepsy among men in their first year of service was 1·03, and that among men at all periods of service ·61 per 1,000; in the previous year the difference was not so marked, the corresponding ratios having been ·69 and ·64 respectively. Mental disease caused a rate of invaliding of 1·33 per 1,000 among men in their first year of service, and one of ·90 among men at all periods of service. In the report for the year 1890 the invaliding rate for mental affections among men in their first year of service was also a good deal higher than that among men at all periods of service though the difference was not so marked as in the year under report, the rates having been ·97 and ·79 per 1,000. In all the foregoing instances the invaliding ratio among men in their first year of service is shown to be in excess of that among men at all periods of service, but in the following instance, tubercular disease, this condition is reversed, the ratio of men in their first year being 1·09 and that of men of all periods of service 1·84 per 1,000; in the preceding year the corresponding invaliding ratios were ·65 and 2·10 respectively.

The following tables have been prepared to show the influence of age and length of service on sickness, mortality, and invaliding among the troops serving in the United Kingdom during the year:—

Ages.	Average Strength.	Admission.	Deaths.	Invalided.	Ratios per 1,000 of Strength.		
					Admission.	Mortality.	Invaliding.
Under 20 years - -	31,240	27,123	96	351	868·2	3·07	11·23
From 20 to 24 years -	34,773	36,157	153	653	1039·8	4·40	18·78
„ 25 „ 29 „ -	18,844	9,682	102	263	513·8	5·41	13·96
„ 30 „ 34 „ -	7,682	2,186	61	78	284·6	7·94	10·15
„ 35 „ 39 „ -	4,426	1,030	50	71	232·7	11·30	16·04
40 years and upwards -	2,343	515	37	50	219·8	15·79	21·34
Total - -	99,308	76,693	499	1,466	772·2	4·94*	14·51*

* Calculated on strength, including men detached (1,676).

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It will be observed that, as in the preceding year, the admission ratio among men under 20 years of age was high, but not so high as that among men between 20 and 25 years. In the next quinquennium of ages the admission rate drops one half, after which it gradually declined through the remaining age periods; this was also the case in the previous year. Comparing these ratios with the corresponding rates in 1890, a decline is observed in all, varying from 58·8 per 1,000 among men between 35 and 40 years of age to 24·2 among men under 20 years of age. Mortality was least among men under 20 years of age, was greater among men between 20 and 25 years of age, increased slightly among men between 25 and 30 years of age, and with greater rapidity through the succeeding quinquennial periods; this sequence of ratios is similar to that in the preceding year. Comparing the several ratios with similar results for 1890 an increase of 1·77 has occurred in the death rate of men over 40 years of age, and one of ·48 in that of men under 20 years of age; the remaining deaths have declined from 1·31 among men between 20 and 25 years of age to ·54 among men between 25 and 30 years of age. The invaliding ratios also follow a sequence similar to that in the preceding year; in that year there was a low rate among men under 20 years of age, which increased considerably among men between 20 and 25 years of age, declined during the two succeeding quinquennia, and increased again afterwards. Compared with corresponding ratios in the preceding year an increase of ·64 and ·12 respectively is observed in the rates among men under 20 years and over 40 years of age, but a decline has taken place in the remaining rates varying between 3·70 in that among men between 20 and 25 years to 1·36 among men between 35 and 40 years of age.

Service.	Average Strength.	Admission.	Deaths.	Invalided.	Ratios per 1,000 of Strength.		
					Admission.	Mortality.	Invaliding.
Under 1 year - -	30,138	31,111	110	412	1032·3	3·65	13·67
From 1 to 2 years -	16,207	14,746	52	277	909·8	3·21	17·09
„ 2 „ 3 „ -	10,175	8,054	28	144	791·5	2·75	14·15
„ 3 „ 4 „ -	8,449	5,132	31	122	607·4	3·67	14·44
„ 4 „ 5 „ -	8,146	4,840	35	131	594·2	4·30	16·08
„ 5 „ 10 „ -	15,610	9,562	108	263	612·5	6·92	16·85
10 years and upwards -	10,583	3,248	135	117	306·9	12·76	11·05
Total - -	99,308	76,693	499	1,466	772·2	4·94*	14·51*

* Calculated on strength, including men detached (1,676).

In this table it will be seen that the highest admission rate was among men in their first year of service, that among men in their second year not being much lower. After this, however, the ratios decline steadily through the different age periods until five years' service is reached when the ratio rises among men between 5 and 10 years' service, but subsequently falls about one half. In the preceding year the prevalence of sickness at different periods of service was similar. Comparing the ratios with the corresponding ones in the previous year an increase of 45·0 per 1,000 has occurred in the ratio among men in their third year of service, and one of 2·9 in that among men of 10 years' service and upwards. A decline has taken place in all the remaining ratios, being as much as 135·1 in that among men in their fourth year of service, 91·6 among men between five and ten years' service, and 90·4 among men in their fifth year of service. The death ratios were not high among men during their first five years of service, the lowest rate being 2·75 among men in their third year, and the highest, 4·30, among men in their fifth year, after which time an increase occurred. In the preceding year the ratios did not follow a similar course. Comparing the rates with the last year's results there was a fractional increase in the death rates among men under one year and over ten years' service, but in all the other ratios there was a decline varying from 2·83 among

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men in their fifth year to ·88 among men in their second year of service. The invaliding ratio was not high among men in their first year of service, but increased a good deal among men in their second year, falling again among men in their third year, after which time there was a steady increase in the ratios up to that among men of five to ten years' service, which was followed by a decline in the ratio among men over ten years' service. Though the different ratios differ a good deal from the corresponding rates in the preceding year, a decrease having occurred in every instance except one, yet the sequence of the ratios in that year is very similar to that in the year under report. The instance of increase of invaliding rate as compared with the return for 1890 was in that among men under one year's service; the cases of decrease extended from ·99 among men in their second year to 8·09 among men over ten years' service.

The admissions, deaths, invalids discharged the service, and average number constantly sick in the various military districts are shown in the following table:—

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Military Districts.	Average Annual Strength.	Admissions into Hospital.	Deaths.*			Invalids discharged the Service.*	Average Number Constantly Sick.	Ratio per 1,000 of Mean Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
			With the Regiment	Absent from the Regiment.	Total.			Admitted into Hospital.	Died.	Invalids discharged the Service.	Constantly Sick.		
												days.	days.
1. North-eastern - -	4,739	3,440	25	1	26	46	160·59	725·9	5·49	9·71	33·88	12·37	17·04
2. North-western - -	4,457	2,970	20	3	23	48	132·41	666·3	5·16	10·77	29·71	10·54	16·27
3. Eastern - - -	5,573	5,125	24	5	29	124	354·91	919·8	5·20	22·25	45·75	16·69	18·15
4. Western - - -	6,469	5,114	39	1	40	74	260·73	790·5	6·18	11·44	40·30	14·71	18·61
5. Southern - - -	8,026	6,415	48	5	53	165	466·21	799·2	6·60	20·31	50·61	18·47	23·11
6. Thames - - -	4,501	2,415	31	2	33	41	155·46	536·5	7·33	9·11	34·54	12·60	23·49
7. South-eastern - -	7,560	6,758	32	4	36	145	340·19	893·9	4·76	19·18	44·99	16·42	18·37
8. Home - - - -	7,372	6,005	38	1	39	135	371·95	814·5	5·29	18·31	50·45	18·41	22·60
9. Woolwich - - -	5,844	4,192	27	4	31	56	222·33	717·3	5·30	9·58	38·04	13·88	19·36
10. Aldershot - - -	14,177	12,623	45	4	49	244	712·97	890·4	3·45	17·21	50·29	18·35	20·61
11. Channel Isles - -	1,771	1,406	2	—	2	32	67·52	793·9	1·13	18·07	38·12	13·91	17·53
12. North British - -	3,854	2,554	16	1	17	42	102·57	662·7	4·28	10·59	26·61	9·71	14·66
13. Belfast - - -	3,778	2,667	14	1	15	60	125·91	705·9	3·97	15·88	33·32	12·16	17·23
14. Dublin - - -	7,606	6,220	38	—	38	122	376·19	817·5	4·99	16·03	49·44	18·04	22·07
15. Cork - - - -	3,457	5,453	35	5	40	81	260·57	644·8	4·73	9·57	30·81	11·24	17·44
16. Curragh - - -	5,138	3,336	24	4	28	53	186·68	651·2	5·46	10·37	36·44	13·30	20·42
Total - - -	99,306	76,693	458	41	499	1,466	4137·19	772·2	4·94	14·81	41·66	15·20	19·69
Average of 10 years, 1881 to 1890 - - - -	919,826	755,079	5,219	412	5,631	17,875	42330·00	820·9	5·97	19·43	46·02	16·79	20·46

* Total deaths and invalids calculated on strength, including men detached (1,676).

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From the foregoing table it will be seen that the highest admission ratio in any district was 919·8 per 1,000 in the Eastern district, followed by 893·9 in the South-eastern district, and 890·0 at Aldershot; the lowest ratio was 536·5 in the Thames district, the next above being 644·8 in the Cork district, and 651·2 at the Curragh. In the previous year also the highest admission ratios were in the same three districts, but the lowest rate was at the Curragh. Compared with corresponding ratios in the previous year the admission rates in the North-eastern, Aldershot, Channel Isles, Belfast, and the Curragh districts have increased, but in no instance to any great extent; in all the remaining districts a decrease is observed, the most marked instance being in the Thames district, where the decline equalled 163·2. With regard to mortality the highest ratio in any district was 7·33 per 1,000 in the Thames district, the Southern and Western districts being next in order with 6·60 and 6·18 respectively; the lowest death rate was 1·13 in the Channel Islands, the next above being 3·45 at Aldershot and 3·97 in the Belfast district. In the previous year mortality was greatest in the North-eastern and next in the Dublin district, and was least in the Thames and Cork districts. Compared with last year's return the death rates have increased in the Thames, Western, Curragh, Woolwich, and Cork districts, in the first-named by as much as 3·64; in all the remaining districts a decrease is observed, the most marked being 5·47 in the Channel Islands. As to invaliding, the three highest ratios were 22·25 per 1,000 in the Eastern district, 20·31 in the Southern district, and 19·18 in the South-eastern district; and the three lowest ratios were 9·11 in the Thames district, 9·57 in the Cork district, and 9·58 in the Woolwich district. In the preceding year the invaliding rates varied from 29·44 per 1,000 in the North British district to 8·04 in the Woolwich district. Compared with last year's results increase of invaliding rate occurred in the Eastern, Western, Southern, Woolwich, Belfast, and Dublin districts, also in the Channel Islands, where the increase was equal to 5·47; in the nine other districts a decrease is observed, that in the North British district being as much as 18·85. The highest ratio of constant inefficiency through sickness in any district was 50·61 per 1,000 in the Southern district, followed closely by 50·45 in the Home district, and 50·29 at Aldershot; the lowest rate was 26·61 in the North British district, the next above being 29·71 in the North-western district, and 30·81 in the Cork district. In the previous year the highest rate of constantly sick was 54·59 per 1,000 in the Home district, and the lowest 29·27 in the North British district. Compared with corresponding results in 1890 a decrease has occurred in the constantly sick rate of every district, except the Channel Islands and the Belfast district, in both of which an increase is observed.

The average sick time to each soldier was longest in the Southern district, 18·47 days, followed by the Home district with 18·41 days and Aldershot with 18·35 days; the shortest sick time was 9·71 days in the North British district, the next being 10·84 days in the North-western district, and 11·24 days in the Cork district. In the preceding year the longest period was in the Home district, and the shortest in North Britain. Compared with similar results in the previous year, with the exception of an increase in the Channel Islands and a fractional one in the Belfast districts, the average sick time to each soldier was shorter in all the different districts. The average duration of each case of sickness was longest in the Thames district, 23·49 days, the next in the Southern district, 23·11, and then in the Home district, 22·60 days; the shortest period was 14·66 days in the North British district, then 16·27 days in the North-western district, and 17·04 days in the North-eastern district. In the previous year the longest period was 22·57 days in the Home district, and the shortest, 14·84 days, in the North British district. Compared with the return for 1890 the average duration of each case of sickness was longer in the Eastern, Southern, Thames, Home, Channel Islands, and Dublin districts, but shorter in the remainder.

A table is now given showing the statistics of sickness and mortality among troops quartered in the large camps at Aldershot, Colchester, Shorncliffe, the Curragh, &c., as compared with those of troops stationed in 38 large towns,

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where the average strength of non-commissioned officers and men was over 500 :— *United Kingdom.*

1891.	Average Annual Strength.	Admissions.	Died.	Average constantly Sick.	Ratio per 1,000 of Mean Strength.		
					Admissions.	Deaths.	Constantly Sick.
Camps - -	25,313	20,840	107	1159·85	823·3	4·23	45·82
Towns - -	53,629	41,975	277	2372·09	797·6	5·26	45·07

It will be noticed that the admission ratio among men quartered in camps is in excess of that of men quartered in towns by 25·7 ; in the previous year there was also an excess of admission rate among men in camps, but only to a very limited extent. The death rate is shown to be higher among men quartered in towns than among men quartered in camps, in the preceding year also this was the case. As to the ratios constantly sick in the two classes the difference between them is only fractional, but the highest was among men in camps, while in the previous year it was among men in towns. Comparing the ratios of sickness and mortality among troops quartered in camps, and also of those quartered in towns with corresponding results for the year 1890 it will be observed that a decline has occurred in each one of the ratios.

The following table, compiled from the Returns of Principal Medical Officers, shows the admissions, deaths, number of men invalided, and number constantly sick, from each arm of the service, with the ratios per 1,000 of the strength, and the corresponding ratios for the previous 10 years :—

Arms of the Service.	Average Strength.	Admitted into Hospital.	Died.	Discharged as Invalids.	Average Number constantly Sick.	Annual Ratio per 1,000 of Strength.				Average of 10 Years, 1881–90.			
						Admitted.	Died.	Invalided.	Constantly Sick.	Admitted.	Died.	Invalided.	Constantly Sick.
Household Cavalry	1,233	865	4	16	37·87	701·5	3·24	12·98	30·71	651·7	3·66	22·56	34·27
Cavalry - -	10,579	8,300	42	189	497·29	831·8	3·97	17·86	47·01	879·2	5·07	21·14	49·37
Royal Artillery -	16,813	11,568	91	223	649·93	688·0	5·41	13·26	38·66	751·0	6·79	20·61	45·09
Royal Engineers -	4,484	2,050	31	39	124·11	457·2	6·91	8·70	27·68	450·9	7·15	13·64	33·13
Foot Guards -	4,844	4,108	21	93	287·05	848·0	4·33	19·20	59·26	950·7	6·16	22·20	60·23
Infantry - -	42,250	38,026	190	741	2044·26	900·0	4·50	17·54	48·38	885·5	5·29	19·43	50·10
Regimental Depôts	12,326	8,336	81	101	325·19	676·3	6·57	8·19	26·38	776·1	8·56	19·04	33·30
Garrison Staff and Departments.	6,779	2,940	39	64	171·49	433·7	5·75	9·44	25·30	586·8	6·92	12·48	35·70

The highest admission ratio in any arm of the service was 900·0 per 1,000, in the Infantry, the next being 848·0 in the Foot Guards, and the lowest was 433·7 in the Garrison Staff and Departments, the next above being 457·2 in the Royal Engineers. In the preceding year the highest admission rate was in the Cavalry, followed by that in the Foot Guards ; the two lowest ratios were in the same arms as in the year under report. Taking the 10 years' average the highest admission rate was in the Foot Guards, and the lowest in the Royal Engineers. The greatest mortality was in the Royal Engineers, and the next in the Regimental Depôts, the ratios being 6·91 and 6·57 per 1,000 respectively, in the previous year the highest ratios were in the Regimental

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Depôts and the Royal Artillery; the lowest death rates were 3·24 and 3·97 per 1,000, in the Household Cavalry and Cavalry respectively. In 1890 the lowest was also in the Household Cavalry, but the next was in the Infantry. On the 10 years' average the Regimental Depôts give the highest death rate, and the Household Cavalry the lowest. With regard to invaliding the highest ratio was 19·20 per 1,000 in the Foot Guards, the next being 17·86 in the Cavalry; the lowest ratios were 8·19 in the Regimental Depôts, and 8·70 in the Royal Engineers. In the previous year the two highest rates were in the Household Cavalry and Foot Guards, and the two lowest in the Garrison Staff and Departments and Royal Engineers. The decennial average ratios show the highest in the Household Cavalry, and the lowest in the Garrison Staff and Departments. Constant inefficiency through sickness gave the highest ratio in the Foot Guards, 59·26 per 1,000, succeeded by the Infantry with 48·38, the lowest ratios were 25·30 and 26·38 per 1,000 respectively in the Garrison Staff and Departments and the Regimental Depôts. In the previous year the highest ratios were in the same arms of the service as in the year under report, as also were the lowest ratios, except that their relative positions were changed. Taking the average of the preceding 10 years the highest ratio of constantly sick is found in the Foot Guards and the lowest in the Royal Engineers. Comparing the admission ratios of the different arms of the service in the year under report with those of the previous year it is observed that, with the exception of the ratio for the Infantry, in which an increase of 13·4 is shown, there was a decline in all the rates, being as much as 168·5 in the case of the Royal Engineers, 82·6 in that of the Garrison Staff and Departments, and 81·1 in that of the Cavalry. The mortality rates also, with the exception of that of the Royal Engineers, which has increased by ·93, have all declined, those of the Foot Guards and Cavalry by 2·06 and 2·00 respectively, and the others to a less extent. The invaliding ratios have declined without exception of any arm of the service, the decrease varying from 10·83 in the Household Cavalry to ·34 in the Garrison Staff and Departments. The constantly sick rates for all arms of the service have decreased in this comparison the most marked instances being 4·69 in the Garrison Staff and Departments, 4·73 in the Artillery and 4·55 in the Engineers. Compared with corresponding results for the average of the preceding 10 years, there is an increase of 49·8 in the admission rate for the Household Cavalry and to a less extent in those of the Engineers and Infantry; in the remaining arms of the service a decrease has occurred, the principal instances being 102·7 in the Foot Guards and 99·8 in the Regimental Depôts. The mortality rates of the different arms of the service have all decreased as compared with average rates for the preceding 10 years, the greatest decrease was 1·99 in the Regimental depôts and next, 1·83, in the Foot Guards. The invaliding ratios have also declined throughout all the arms of the service in this comparison, the most marked instances were 10·85 in the case of the Regimental Depôts, 9·58 in that of the Household Cavalry, and 7·35 in that of the Artillery. The constant inefficiency through sickness has also declined in all the arms of the service and as compared with those of the 10 years' average have decreased by amounts varying from 10·40 in the Garrison Staff and Departments, 6·92 in the Regimental Depôts, and 6·43 in the Artillery, to ·96 in the Foot Guards.

Abstract XXXIX. gives a table showing the most important of the health statistics of corps which served in the United Kingdom during the year.

In the Household Cavalry the highest admission rate was 883·4 per 1,000 in the 1st Life Guards, stationed in London throughout the year; the lowest ratio was in the Royal Horse Guards, 609·0, quartered in London nine and Windsor three months. There was no mortality in the 1st Life Guards or the Royal Horse Guards, but the death rate in the 2nd Life Guards, three months in London and nine at Windsor, was 9·32 per 1,000. The 2nd Life Guards gave the highest invaliding rate, 18·65, and the 1st Life Guards the lowest, 9·92 per 1,000. The ratio of constant inefficiency through sickness was highest in the 1st Life Guards, 34·49, and the lowest was in the 2nd Life Guards, 28·09 per 1,000.

Among the Cavalry regiments the highest admission ratio was 1235·7 per 1,000 in the 6th Inniskilling Dragoons stationed at Brighton, the next ratio was also high, 1134·3 in the 4th Hussars, quartered four months at Colchester and

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eight at Dublin; the lowest admission rate was 562·5 in the 15th Hussars at Cahir. Mortality was greatest in the 13th Hussars stationed six months at Piershill, four at Ballincollig, and two at the Curragh, the ratio being 10·78 per 1,000; the next ratio was 7·65 in the 12th Lancers, headquarters at Manchester, and detachment at Liverpool; in the 6th Inniskilling Dragoons, and the 19th Hussars at Shorncliffe and Aldershot there was no mortality. The ratio of constantly sick was highest, 85·37 per 1,000, in the 4th Hussars, the next being 67·77 in the 6th Inniskilling Dragoons; the lowest ratio was 23·36 in the 15th Hussars. *United Kingdom.*

As to the Artillery, the highest annual admission rate among the Horse Artillery batteries was 1238·1 per 1,000 in P Battery at Dorchester for a short time on return from India; the highest annual ratio of constantly sick, 45·71, being in the same battery; D Battery, quartered at Aldershot, gave the lowest admission and constantly sick rates 523·1 and 25·61 respectively. The highest mortality rate was 9·26 in O Battery, at the Curragh; but in seven batteries there was no mortality. Invaliding was highest in F Battery at Woolwich, 14·18 per 1,000, and in J Battery in London and Woolwich, and in P Battery there was no invaliding. Of Field Artillery, among batteries having an average annual strength of over 100 men, the highest admission ratio was 1507·4 per 1,000 in No. 13 Battery at Hilsea, followed by 1342·8 in No. 77 Battery at Colchester, the next being 1336·5 in No. 66 Battery at Christchurch nine months and Newcastle-on-Tyne three months; the lowest being 282·1 in No. 29 Battery at Clonmel. The highest mortality rate was 20·69 per 1,000 in No. 45 Battery at Woolwich; the next, 19·80 in No. 63 Battery at Colchester; in several batteries there was no mortality. Invaliding was highest in No. 62 Battery at Newcastle-on-Tyne, the rate being 61·40; in No. 77 Battery the rate was 47·62, but in twelve batteries no invaliding occurred. The highest constantly sick rate was 90·15 per 1,000 in No. 13 Battery, the next being 87·78 in No. 79 Battery at Colchester; the lowest being 14·87 in No. 29 Battery. Among the divisions of Garrison Artillery the Southern shows the highest admission constantly sick and invaliding rates, 706·2, 44·91, and 16·13 per 1,000, but the highest rate of mortality, 7·86 per 1,000 is found in the Western Division.

In the Foot Guards the highest admission rate was 1286·4 per 1,000 in the 1st Battalion Coldstream Guards, in London nine months and Dublin three; the lowest ratio was 662·6 in the 2nd Battalion Scots Guards, at Windsor eight and in London four months. The greatest mortality was in the 3rd Battalion Grenadier Guards, 9·01 per 1,000; in the 2nd Battalion Grenadier Guards there was no mortality. The invaliding rates varied from 31·28 per 1,000 in the 2nd Battalion Coldstream Guards, to 11·73 in the 1st Battalion Grenadier Guards. As to constant inefficiency the highest ratio was 85·94 in the 1st Battalion Coldstream Guards, and the lowest 42·60 in the 2nd Battalion Grenadier Guards, at Dover two months and London four after returning from Bermuda.

Among the regiments of Infantry, excluding those whose average annual strength was less than 100 men, the highest admission ratio was 1514·2 per 1,000, and occurred in the 2nd Battalion Leicestershire Regiment, stationed at Warley, the next being 1470·9 in the 2nd Battalion Welsh Regiment, and 1409·1 in the 1st Battalion Scottish Rifles, quartered in Devonport and Aldershot respectively during the greater part of the year; the lowest ratio was 315·3 in the 2nd Battalion Royal Irish Fusiliers at Athlone, the next above being 475·3 in the 1st Battalion Royal Irish Rifles at Fermoy. The highest mortality rate was 16·57 per 1,000 in the 2nd Battalion Royal West Kent Regiment at Shorncliffe, the next being 11·94 in the 2nd Battalion King's Royal Rifles at Dublin; on the other hand, there were eight regiments in which there was mortality. As to invaliding the 1st Battalion Highland Light Infantry at Dover gave the highest rate, 50·54 per 1,000, the 1st Battalion Royal Irish Regiment at Colchester, 41·98, and the 1st Battalion Border Regiment at Dover, 35·77; the lowest rate was 1·64 in the 1st Battalion York and Lancaster Regiment at Birr, the next above, 1·69, in the 1st Battalion Middlesex Regiment at Kilkenny. The highest constantly sick rate was 86·94 per 1,000 in the 1st Battalion Yorkshire Regiment at Portsmouth, the next, 80·08, in the 1st Battalion Gloucestershire Regiment at Dublin, and 79·70 in

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the 2nd Battalion Leicestershire Regiment; the lowest was 19·71 in the 2nd Battalion Royal Irish Fusiliers, the next above, 22·75 in the 1st Battalion Royal Irish Rifles.

Of the Regimental Depôts the highest admission ratio was 1897·3 per 1,000, and the highest constantly sick rate, 73·63 in the Depôt East Kent Regiment at Canterbury, this was also the case in the previous year; the lowest admission rate was 211·9 in the Depôt Yorkshire Regiment at Richmond, and the lowest rate of constantly sick, 8·74, in the Depôt Cameron Highlanders at Inverness. Mortality was highest in the Depôt Dorsetshire Regiment at Dorchester, the ratio being 25·20 per 1,000; there were high ratios also in the Depôts Royal Fusiliers and Royal Scots at Hounslow and Glencorse, 21·98 and 21·47 respectively; but at twenty-two depôts no mortality occurred. Invaliding gave the highest ratio, 39·21 per 1,000, in the Depôt East Lancashire Regiment at Burnley, the next being 31·50 in the Depôt Border Regiment at Carlisle; at nineteen depôts no men were invalided.

The most important statistics of sickness and mortality amongst officers, women, and children, according to the several groups and orders of diseases, are shown in Abstract D., compiled from the annual returns of Principal Medical Officers.

Officers.—The average strength, as calculated from the annual returns, was 3,972. The number of attacks of illness recorded was 1,531, and there were 19 deaths. The ratio of prevalence of sickness was 385·4, and that of mortality 4·78 per 1,000. In the preceding year the corresponding ratios were 391·9 and 5·80 per 1,000 respectively.

General Diseases.—Diseases dependent on Morbid Poisons.—There were 14 cases of *eruptive fever*, viz., eight of measles, three of scarlet fever, two of epidemic rose rash, and one of chicken-pox. *Enteric fever* caused 14 cases of illness, and 1 death. The ratios of prevalence and mortality were 3·5 and ·25 per 1,000, the former being lower than the corresponding rate in the previous year, but the latter shows no change; 11 of the cases occurred in Ireland, viz.: four at the Curragh, one of which terminated fatally, three at Dublin, three at Cork, and one at Belfast. The remaining 3 cases occurred in England, one in London, Devonport, and Hythe respectively. There were 35 admissions for simple continued fever, equal to a ratio of 8·8 per 1,000, a decline of 3·1 from the corresponding ratio in the preceding year. *Dysentery* was the cause of 8 admissions, being in the ratio of 2·0 per 1,000, an increase of ·5 on the rate in the previous year. *Influenza* being again epidemic caused 221 attacks of illness, equal to a ratio of prevalence of 55·7 per 1,000, which, however, compares favourably with the ratio for the epidemic of the preceding year, which was 78·7. All the different districts except the Curragh, were attacked by the disease, though in the instance of the Channel Isles there was only a single case. The districts showing the greatest number of admissions were Aldershot 35 cases, the Southern district 24, the Eastern 23, the South-eastern 19, the Western and Woolwich 18 respectively, Dublin 16, and Cork 15, &c. The remaining attacks of illness in the first sub-group of diseases were 4 cases of mumps, one of whooping cough, and one of diphtheria.

Malarial Fevers.—56 attacks of illness are shown, of these 3 were cases of remittent fever, and the remainder ague. The ratio of prevalence was 14·1 per 1,000, a fractional increase on the rate in the preceding year.

Septic diseases caused 2 attacks of illness, both cases of erysipelas; in the previous year there were 3 cases.

Venereal Diseases.—The attacks of illness recorded were 6 cases of *secondary syphilis*, 29 of gonorrhœa and 3 of simple venereal ulcer. The ratio of prevalence, therefore, was 9·6 per 1,000, which differs only fractionally from the rate recorded for the preceding year.

Under the head of *alcoholism* two attacks of illness are shown. *Debility* was returned in 32 instances, equal to 8·1 per 1,000, an increase of 5·1.

Rheumatism.—The number of attacks of illness recorded was 70, being in the ratio of 17·6 per 1,000, a decline of 4·1 from the previous year's rate. There were 4 cases returned as rheumatic fever.

Tubercular Disease.—3 cases of lung affection occurred, one of which was fatal. In the previous year there was a single case only. The remaining cases

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of this group of diseases were five of anæmia, and one of non-malignant new growth.

Local Diseases.—Diseases of the Nervous System caused 44 cases of illness, and 1 death. The ratio of prevalence, 11·1 per 1,000, is above that in the preceding year by 3·7. Three-fourths of the cases were due to neuralgia, and among the remainder were 3 of epilepsy, 2 of apoplexy, and 2 of paralysis. There was no instance of mental affection. The death was caused by apoplexy.

Diseases of the Organs of Special Senses were in the ratio of prevalence of 5·5 per 1,000, rather in excess of that in the previous year. The cases were 14 of ophthalmic disease, 7 of aural disease, and 1 of nasal affection.

Diseases of the Circulatory System were represented by a single case, an instance of aortic aneurysm. In the previous year there were 9 cases and 3 deaths.

Diseases of the Respiratory System.—263 cases of illness are recorded and 5 deaths. The ratio of prevalence, 66·2 per 1,000, differs only by a decline of 1·4 from the previous year's rate. The chief causes of sickness were bronchitic affections 223 cases, and among the remainder were 15 of pneumonia, and 7 of pleurisy. Of the deaths 4 were due to pneumonia, and 1 to bronchitis.

Diseases of the Digestive System were the cause of 242 attacks of illness, and 3 deaths. The ratio of prevalence was, therefore, 60·9 per 1,000, an increase of 1·6 on the similar rate in the previous year. The cases treated included 102 of affections of the mouth and throat, 54 of hepatic disease (three being abscess of the liver), 30 of diarrhœa, and 24 of dyspepsia. The deaths were one from diarrhœa, hepatitis, and hepatic abscess respectively.

Diseases of the Lymphatic and Glandular System caused a ratio of prevalence of 5·3 per 1,000, much the same as in the previous year.

Diseases of the Urinary System gave a ratio of sickness of 3·5 per 1,000 dependent on 14 cases, principally cystitis.

Diseases of the Generative System.—The ratio of prevalence was 10·3 per 1,000, double that in the preceding year. Orchitis was the principal cause of sickness, 19 cases out of a total of 41 from all causes.

Diseases of the Organs of Locomotion were at the rate of 6·6, and *diseases of the connective tissue* at the rate of 9·1 per 1,000, which differs very slightly from the corresponding rate in the previous year.

Diseases of the Skin.—The ratio of prevalence was equal to 11·3 per 1,000, a decline of 1·1 from the last year's rate. The cases were of ordinary character, boils being the most frequent.

Injuries.—271 are returned, the ratio being 68·2 per 1,000, higher by 9·9 than the similar rate in the preceding year. Three-fourths of the cases treated were contusions, wounds, or sprains, and among the remainder there were 25 cases of fracture, and 11 of dislocation. As in the previous year there were 7 deaths, viz., one from drowning, accidental; four from gunshot wound, suicidal, a verdict of temporary insanity being returned in each instance; and two from fracture of the skull, due in one case to a fall from some scaffolding, and in the other to a fall from a horse.

WOMEN.—The average strength as gathered from the annual returns was 10,229, and there were 4,472 cases of illness, exclusive of ordinary parturition, and 63 deaths. The ratio of prevalence of sickness, therefore, was 437·2, and that of mortality 6·16 per 1,000, being in excess of the corresponding ratios in the previous year by 26·6 and ·40 respectively.

General Diseases.—Diseases dependent on Morbid Poisons.—28 attacks of illness are shown under the head of *eruptive fevers*, being in the ratio of 2·7 per 1,000, an increase of ·6 on the last year's rate. The cases treated comprised 19 of measles, 6 of scarlet fever, and 3 of epidemic rose rash. *Enteric fever* was the cause of 7 attacks but no death occurred, as compared with 4 and 2 respectively in the preceding year. The cases were 5 at Dublin, 1 at Manchester, and 1 at Aldershot. The attacks of simple continued fever numbered 30, being in the ratio of 2·9 per 1,000, an increase of ·7 in the corresponding rate in the previous year. 12 cases of dysentery are returned, an increase of 8 on the number in the preceding year. One case terminated fatally. *Influenza* caused as many as 372 attacks of illness, or 36·4 per 1,000.

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United Kingdom.

All the districts. with the exception of the Channel Islands and the Curragh, were affected with the epidemic, the greatest number of cases being 74 at Woolwich, 52 at Aldershot, 48 in the Western district, 45 in the North-eastern district, 32 in the North-western, 30 in the Home district, &c. The remaining cases of illness in the first sub-group of diseases, were 6 of mumps, and 2 of diphtheria.

Malarial Fevers.—There were 43 cases, equal to a rate of 4·2 per 1,000, an increase of 1·5 on the last year's rate. Three of the cases were remittent fever, but all the remainder ague.

Septic Diseases.—As in the preceding year 30 attacks are recorded; the ratio of prevalence was 2·9 per 1,000. Of the cases 16 were erysipelas with one death and the remainder septicæmia with four deaths.

Venereal Diseases.—No attack of primary disease is recorded but there were 26 cases of constitutional syphilis as compared with 21 in the preceding year.

Parasitic Diseases.—15 cases are returned, as compared with 7 in the preceding year. Two-thirds of the attacks were cases of tænia solium. Four cases of alcoholism are recorded.

Debility.—Under this head as many as 603 cases are shown; the ratio of prevalence, 58·9 per 1,000, is, however, lower by 3·0 than in the previous year.

Rheumatism.—The number of cases treated was 215, of which 13 were rheumatic fever. The ratio of prevalence, 21·0 per 1,000, is higher by 1·3 than in the previous year.

Tubercular Diseases.—55 cases and 12 deaths are shown, all instances of lung affection. The ratios of prevalence and mortality were 5·4 and 1·17 per 1,000, as compared with 4·9 and 1·32 respectively in the previous year.

The *other diseases* of this group included 88 cases of anæmia, 8 of non-malignant new growth, 5 of cancer, 3 of chlorosis, 2 of myxœdema, and 1 of scrofula. Two deaths are recorded from cancer and one from anæmia.

Local Diseases.—Diseases of the Nervous System.—The number of cases of illness was 237 and there were 6 deaths being in the ratios of 23·2 and ·59 per 1,000 respectively, which are higher than those in the preceding year by 4·9 and ·12. The principal cause of sickness was neuralgia 160 cases, and among the remaining cases the most frequent causes were hysteria 29 cases, epilepsy 16, and mental disease 9 cases. The deaths were 3 from paralysis, and one from apoplexy, eclampsia, and sclerosis of the cord respectively.

Diseases of Organs of Special Senses caused a ratio of prevalence of 5·1 per 1,000, an increase of ·8 on the last year's rate. The cases comprised 34 of ophthalmic affections, chiefly conjunctivitis, 17 of aural diseases, and 1 of nasal affection.

Diseases of the Circulatory System.—The number of cases treated was 77, and there were 3 deaths. The ratio of prevalence was 7·5 per 1,000, a decline of ·2 from the last year's rate. The principal diseases causing sickness were valvular disease of the heart 24 cases, varicose veins 17, palpitation 13, phlegmasia dolens 9, and phlebitis 8 cases. The deaths were two from valvular disease of the heart and one from endocarditis.

Diseases of the Respiratory System.—755 cases of sickness occurred, and 14 deaths, being in the ratios of 73·8 and 1·37 per 1,000 respectively, the former being higher by 7·4 and the latter lower by ·33 than the corresponding ratios in the preceding year. As usual the most prevalent causes of sickness were bronchitic affections, as many as 647 cases, or more than five-sixths of the whole. Among the remaining cases were 34 of pneumonia, the same number of pleurisy, 14 of asthma, 11 of laryngitis, and 10 of pneumonic phthisis.

Diseases of the Digestive System.—The number of cases treated was 884, and there were 5 deaths. The sick rate, therefore, was 86·4, and the death rate ·49 per 1,000; the former shows an increase of 10·6, and the latter a decrease of ·17 from the corresponding rate in the previous year. The principal causes of sickness were dyspepsia 322 cases, affections of the mouth and throat 295, diarrhœa 73, hepatic diseases 46, and peritonitis 10 cases. The deaths were 2 from peritonitis, and one from intussusception, stricture of the rectum, and gastric ulcer respectively.

Diseases of the Lymphatic and Glandular System were the cause of 27 cases of sickness, or 2·6 per 1,000, the same rate as in the preceding year. *Diseases*

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of the urinary system also show no change in the sick rate, 2·4 per 1,000. There were 3 deaths, two from nephritis, and one from Bright's disease. *United Kingdom.*

Diseases of the Generative System.—The cases of sickness numbered 547, and there were 11 deaths. The ratio of prevalence of sickness, 53·5 per 1,000, exceeds that in the preceding year by 9·3, and the death rate 1·08 per 1,000 is higher by ·70 in this comparison. The causes of sickness were very numerous, principally functional or symptomatic diseases 200 cases, affections connected with pregnancy 169, uterine affections 51, &c. The deaths were 4 from placenta prævia, 3 from metritis, 2 from post-partum hæmorrhage, one from abortion, and there was one case of sudden death after delivery.

Diseases of the Organs of Locomotion gave a sick rate of 1·9 per 1,000, a slight increase, and *diseases of the connective tissue* a rate of 8·0 per 1,000, also a slight increase as compared with the previous year.

Skin Diseases gave a ratio of prevalence of 10·7 per 1,000, an increase of ·3 on the rate in 1890. Ulcers, eczema, and boils were the chief causes of sickness.

Injuries.—Under this head 103 are recorded, equal to a ratio of 10·1 per 1,000, which is higher by 2·5 than the corresponding ratio in the preceding year. The most frequent injuries were contusions, sprains, and wounds, and among the remainder were 10 cases of fracture, 9 of burns or scalds, 2 of dislocation, one of heat stroke, and one of concussion of the brain.

CHILDREN.—The average strength of children was 20,727, and there were 11,046 cases of illness, and 440 deaths, equal to ratios of 532·9, and 21·22 per 1,000. Compared with corresponding ratios in the preceding year, the rate of prevalence has increased by 22·2, but the death rate has decreased by 1·85.

General Diseases.—Diseases dependent on Morbid Poisons.—There were 1,774 cases of sickness shown under the head of *eruptive fevers*, equal to 85·6 per 1,000, and there were 33 deaths, equal to 1·59 per 1,000. Measles caused 1,400 cases of illness, equal to a ratio of 67·5 per 1,000, which, however, is lower by 3·6 than the corresponding rate in the previous year. With the exception of the Channel Islands and the Curragh, all the districts were affected to some extent, and the districts showing the greatest number of cases were Aldershot 313, the Southern district 227, and the Home district 209 cases. The number of deaths was 25, of which nine occurred in Aldershot, and five at Woolwich. Scarlet fever caused 147 cases of illness, the ratio of prevalence being 7·1 per 1,000, a decline of 2·2 from the last year's rate. The Channel Islands and the Curragh were the only districts which were entirely unaffected by the disease. Aldershot showed the greatest number of cases, 41, the North-British came next with 15, then the Thames and South-eastern with 14 cases each, and Woolwich 11 cases. There were 8 deaths, two in Aldershot, and one in each of six different districts. The remaining cases of eruptive fever were 37 of epidemic rose-rash (29 at Woolwich), 6 of cow-pox, and 184 of chicken-pox.

Enteric Fever caused 17 attacks but no death; in the previous year there were 7 attacks and 1 death. The cases were 3 at Cork, 2 each at Edinburgh, Woolwich, Dublin, and Aldershot, and one at Pembroke Dock, Guildford, London, Chatham, Gosport, and Colchester respectively.

Simple Continued Fever gave 157 cases of illness, or 7·6 per 1,000, an increase of 2·5 on the last year's rate. Woolwich and the Channel Islands were the only districts which were not affected. The districts giving the greatest number of cases were Aldershot 29, Belfast 20, and Western 19 cases. There were 17 admissions for *dysentery*, but no death; in the previous year there were 18 cases and 3 deaths. Cases occurred in all the English districts except the Channel Islands, but Scotland and Ireland gave no instance of this disease. *Whooping cough* caused 565 attacks and 14 deaths; the rate of prevalence was 27·2 per 1,000, an increase of 2·5 on the last year's rate. The disease was more or less prevalent everywhere; the Curragh being the only district unaffected. There were 25 cases of diphtheria, and 10 deaths. In the North British district there were 10 cases and 2 deaths, in the Eastern 5 cases and 2 deaths, in the Cork district 3 cases, all fatal, in the Home district 3 cases, none fatal, in the Thames, Aldershot, and Dublin districts, single cases, all fatal, and in the Southern district a single case, which recovered. Mumps

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United Kingdom.

caused 133 attacks, very nearly three times as many as in the previous year. Influenza gave as many as 435 cases of sickness, equal to 21·0 per 1,000, which, however, is less than the sick rate, due to the outbreak in the previous year. With the exception of the Curragh and the Channel Islands, all the districts were more or less affected by the epidemic. Woolwich gave the greatest number of cases of any district, 101, and next came the North-eastern district with 60, and Aldershot with 54 cases. Only one death occurred.

Malarial Fevers.—There were 46 attacks, including one returned as remittent fever, the remainder being ague. The ratio of prevalence was 2·2 per 1,000, an increase of ·8 on the previous year's rate.

Septic Diseases.—13 cases of erysipelas occurred as compared with 14 in the preceding year; four of the attacks proved fatal.

Venereal Diseases.—Under this head 22 cases of congenital or hereditary syphilis are reported, of which six terminated fatally. The ratio of prevalence, 1·1 per 1,000, shows a slight decline.

Parasitic Diseases.—68 cases are returned, principally of intestinal worms, including nine of tænia solium. The ratio of prevalence, 3·3 per 1,000, shows very little change. One death occurred from thrush.

Developmental Diseases.—In this group 413 cases of sickness and 57 deaths are recorded, being in the ratios of 19·9 and 2·75 per 1,000, the former being lower by 1·3 and the latter higher by ·22 than the corresponding rate in the previous year. Among the cases were 37 of immaturity at birth, and 7 of congenital malformation, the remainder being recorded as debility. The deaths comprised 35 from immaturity at birth, 21 from debility, and 1 from congenital malformation.

Rheumatism.—54 cases are returned, being in the ratio of 2·6 per 1,000, as compared with 1·5 in the previous year. Among the cases were 9 of rheumatic fever.

Tubercular Diseases.—The ratio of prevalence of these diseases was 1·8, and that of mortality from them 1·01 per 1,000, the corresponding rates in the preceding year having been 1·9 and ·84 respectively. Of 38 cases of sickness 7 are returned as lung affection, and of 21 deaths 4 are attributed to that form of disease. *Other diseases* of this group caused 106 cases of sickness and 3 deaths. The cases comprised 37 of scrofula, 34 anæmia, 25 of rickets, 6 of non-malignant new growth, and 4 of chlorosis. The deaths were 2 from anæmia, and one from rickets.

Local Diseases.—Diseases of the Nervous System.—The attacks of illness numbered 259 and the deaths 86. The ratio of prevalence, therefore, was 12·5 and that of mortality 4·15 per 1,000, being in excess of the corresponding ratios in the preceding year by 2·0 and ·22 respectively. As many as 163 cases were convulsions, and among the remainder were 19 of neuralgia, and 19 of inflammation of the brain or its membranes. The deaths were 66 from convulsions, 15 from inflammation of the brain or its membranes, 2 from hydrocephalus, and 1 from epilepsy, paralysis, and atrophy of the spinal cord respectively.

Diseases of the Eye caused 241 cases of illness, of which three-fourths were cases of simple conjunctivitis. The ratio of prevalence, 11·6 per 1,000, shows an increase of 3·0 on the previous year's rate. *Diseases of other organs of special senses* gave a ratio of sickness of 4·2 per 1,000, an increase of 1·4. Aural disease caused 81 of the cases, mostly inflammation of the external meatus, and there were 6 cases of nasal affection.

Diseases of the Circulatory System caused only 9 cases of sickness comprising 7 of valvular disease of the heart, one of palpitation, and one of nævus. One death occurred, due to valvular disease.

Diseases of the Respiratory System.—3,303 attacks of illness and 138 deaths are returned, being in the ratios of 159·4 and 6·66 per 1,000 respectively, the former being higher by 9·4 and the latter lower by 1·07 than the corresponding rates in the previous year. Bronchitic affections account for the greater part of the cases, all but 237 being due to this cause, the remainder comprising 156 of pneumonia, 32 of laryngitis, 30 of croup, 14 of pleurisy, 3 of pneumonic phthisis, and 2 of asthma. The deaths were 105 from bronchitis, 20 from pneumonia, 10 from croup, and 1 from laryngitis, pleurisy, and pneumonic phthisis respectively.

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Diseases of the Digestive System were the cause of 1,773 cases of illness and 50 deaths, being in the ratios of 85·5 and 2·41 per 1,000 respectively. Compared with corresponding ratios in the preceding year an increase of 2·4 is observed in the former and a decrease of ·21 in the latter. The chief causes of sickness were affections of the mouth and throat 897 cases, diarrhœa 416, and dyspepsia 296 cases. The deaths were 22 from diarrhœa, 17 from teething, 6 from enteritis, 2 from jaundice, 2 from intestinal obstruction, and 1 from prolapsus ani. *United Kingdom.*

Diseases of the Lymphatic and Glandular System caused 100 cases of sickness and 2 deaths. The ratio of prevalence, 4·8 per 1,000, is slightly below the previous year's rate.

Diseases of the Urinary System.—21 cases of sickness are returned as compared with 22 in the previous year. No death occurred. *Diseases of the generative system* show 19 cases of sickness, and *diseases of organs of locomotion* 25, as compared with 12 and 24 respectively in the year 1890.

Diseases of the Connective Tissue.—135 admissions and 1 death are returned. The ratio of prevalence was 6·5 per 1,000, a decline of ·7 from the last year's rate. The death was due to abscess.

Diseases of the Skin caused an admission rate of 34·7 per 1,000, an increase of 10·8 on the corresponding rate in the previous year. The most frequent causes of sickness were eczema and ringworm; of the former one fatal case occurred. Six cases are returned under the head of *poisons*, two of poisoning by fish, one of which was fatal, and four by vegetable poisons, one fatal, from eating poisonous berries.

Injuries.—467 are recorded with 7 deaths, being in the ratios of 22·6 and ·33 per 1,000 respectively, both of which are in excess of the corresponding ratios in the preceding year. The most frequent injuries were wounds 161 cases, contusions 110, burns or scalds 88, and fractures 53 cases. The deaths were 3 from burns, 2 from fracture, one from drowning, and one from asphyxia by overlying.

Vaccination.

In the following table are shown the conditions as to vaccination of all recruits found fit on inspection for the service, together with the proportion per 1,000 of each condition.

1891.	Number of Recruits found fit on inspection for the Service.	Proportion per 1,000.
Had marks of vaccination - -	37,043	964·4
Had marks of small-pox - -	304	7·9
Had neither marks of vaccination nor of small-pox - - -	1,065	27·7
Total - -	38,412	1000·0

Compared with the similar table for the previous year, an increase of 16·4 per 1,000 is observed among recruits bearing marks of vaccination, with a decrease of 13·1 among those bearing marks of small-pox, and one of 3·3 among those bearing neither marks of vaccination nor small-pox.

The following tables, compiled from the annual returns of Principal Medical Officers, show the number of vaccinations performed during the year with the proportion per 1,000 of successful or modified results or of failures, whether vaccinated with fresh or preserved lymph.

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1891.—Results.	Vaccinated during the Year.						Proportion per 1,000.					
	Arm to Arm.		From Preserved Lymph.		Total.		Arm to Arm.		From Preserved Lymph.		Total.	
	Primary Vaccination.	Re-Vaccination.	Primary Vaccination.	Re-Vaccination.	Primary Vaccination.	Re-Vaccination.	Primary Vaccination.	Re-Vaccination.	Primary Vaccination.	Re-Vaccination.	Primary Vaccination.	Re-Vaccination.
TABLE I.—*Recruits.*												
Perfect vaccine pustules	16	1,421	216	21,290	232	22,711	727·3	678·3	815·1	702·2	808·4	700·7
Modified vaccine pustules	—	319	31	5,568	31	5,887	—	152·2	117·0	183·6	108·0	181·6
Failures	6	355	18	3,461	24	3,816	272·7	169·5	67·9	114·2	83·6	117·7
Total	22	2,095	265	30,319	287	32,414	1000·0	1000·0	1000·0	1000·0	1000·0	1000·0
TABLE II.—*Soldiers other than Recruits.*												
Perfect vaccine pustules	3	285	21	1,121	24	1,406	1000·0	512·6	617·6	470·2	648·6	478·2
Modified vaccine pustules	—	97	7	710	7	807	—	174·5	205·9	297·8	189·2	274·5
Failures	—	174	6	553	6	727	—	312·9	176·5	232·0	162·2	247·3
Total	3	556	34	2,384	37	2,940	1000·0	1000·0	1000·0	1000·0	1000·0	1000·0
TABLE III.—*Soldiers and Recruits.*												
Perfect vaccine pustules	19	1,706	237	22,411	256	24,117	760·0	643·5	792·6	685·3	790·1	682·2
Modified vaccine pustules	—	416	38	6,278	38	6,694	—	156·9	127·1	192·0	117·3	189·3
Failures	6	529	24	4,014	30	4,543	240·0	199·6	80·3	122·7	92·6	128·5
Total	25	2,651	299	32,703	324	35,354	1000·0	1000·0	1000·0	1000·0	1000·0	1000·0

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The number of recruits vaccinated during the year was 32,701, an increase of 2,766 on the number vaccinated in the previous year; the number of soldiers other than recruits was 2,977, an increase of 143. The total increase of operations of vaccination was therefore 2,909. *United Kingdom.*

The number of recruits found fit for service on inspection during the year was 38,412, of which, as shown above, 32,701 underwent the operation of vaccination after enlistment; it appears, therefore, that 5,711 are not here accounted for, but of this number many joined from the Militia, in which force they had already been satisfactorily vaccinated; some men joined so late in the year that their vaccination does not appear in these returns, and in some cases men deserted after enlistment before there was time to vaccinate them.

Comparing the first table relating to the vaccination of recruits with corresponding results in the previous year, it is observed that there were very few cases of arm-to-arm primary vaccination, but among these the proportion of perfect vaccine pustules decreased by 28·3 per 1,000, and there being no modified results the decrease in these appears to be 244·4, but these are counterbalanced by the increase in the proportion of failures. In arm-to-arm revaccination there was an increase of 89·9 per 1,000 in the proportion of perfect vesicles, and a decrease of 46·2 and 43·7 respectively in the proportions of modified results and failures.

In vaccinations with preserved lymph very satisfactory results have been obtained, there being in the case of primary vaccination an increase of 128·3 per 1,000 in the proportion of perfect vaccine vesicles, with a decrease of 25·9 in the modified results, and one of 102·4 in the proportion of failures. In revaccination with preserved lymph, which in the preceding year showed a very large increase in the proportion of perfect vaccine vesicles in the year under report, shows a further increase of 31·4 per 1,000, and there was a slight increase, ·8, in that of failures, being counterbalanced by a decline of 32·2 in the proportion of modified results.

The total results of primary vaccination among recruits show an increase of 107·9 per 1,000 in the proportion of perfect results, with a decrease of 55·0 in the proportion of modified vesicles, and of 52·9 in that of failures. The total results of re-vaccination among recruits are also satisfactory, the increase in the proportion of perfect vesicles being 46·4 per 1,000, while there is a decrease of 30·7 in the proportion of modified results, and one of 15·7 in that of failures.

With regard to the vaccination of soldiers, other than recruits, it is observed that there were very few instances of primary vaccination, either arm-to-arm or with preserved lymph, but that among the more numerous cases of re-vaccination the increase of perfect results was equal to 77·2 per 1,000, being counterbalanced by a decrease of 22·5 in modified vesicles, and one of 54·7 in failures. In re-vaccination with preserved lymph only the decrease in the proportion of failures was 46·9, and that in modified vesicles 14·4 per 1,000, while the increase in perfect results is equal to 61·3.

Taking all classes of soldiers together it will be seen from Table III. that, compared with the previous year's results, there is in primary vaccination an increase of 128·5 per 1,000 in the proportion of perfect vesicles, with a decrease of 80·4 in that of modified vesicles, and one of 48·1 in that of failures. In re-vaccination also similar results were obtained, perfect vesicles having increased in the proportion of 49·7 per 1,000, and modified vesicles and failures having decreased by 30·3 and 19·4 per 1,000 respectively.

Out of a total of 35,678 operations of vaccinations on soldiers 24,373, or 683·1 per 1,000, gave perfect results, 6,732, or 188·7 per 1,000, gave modified results, and 4,573, or 128·2 per 1,000, were failures. Comparing these proportions with those for the year 1890 an increase of 50·4 has occurred in that of perfect vesicles, a decrease of 30·8 in that of modified results, and one of 19·6 in failures.

Women.—There were in all only 99 operations of vaccination on women, 15 being cases of primary and 84 cases of re-vaccination; of the latter 67 cases, or 797·6 per 1,000, gave perfect vaccine vesicles, 1·3, or 154·8 per 1,000, modified vaccine vesicles, and 4 cases, or 47·6 per 1,000, were failures. Compared with similar results in the preceding year there is an increase of as much

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as 287·8 per 1,000 in the proportion of perfect results, with a decline of 21·7 in the proportion of modified results, and of 266·1 in the proportion of failures.

CHILDREN.—There were 555 cases of arm-to-arm primary vaccination, of which 521, or 938·7 per 1,000, gave successful results, the remaining 34 being failures. The proportion of successful results is slightly lower than in the previous year by 3·5. There were only 5 cases of arm-to-arm vaccination, all successful. Of 2,387 cases of primary vaccination with preserved lymph 2,207 were successful being in the proportion of 924·6 per 1,000, an increase of 19·2 on the similar result in the previous year. Re-vaccination with preserved lymph was practised in 45 cases with one failure. The proportion of successes, 977·8 per 1,000, is higher than in the previous year by 124·5. The total number of primary vaccinations were 2,942, of which 214 were failures. the successful cases were in the proportion of 927·3 per 1,000, an increase of 9·9. 50 re-vaccinations, all successful but one, gave a ratio of success of 980·0 per 1,000, an increase of 124·4 on the last year's rate. The total number of children vaccinated were 2,992 in number, of which 2,777, or 928·1 per 1,000, were successful, which is a higher proportion than in the year 1890 by 12·5 per 1,000.

Small-pox.—During the year in the United Kingdom 1 man was attacked with small-pox, but no case occurred among the women or children, and no death occurred. In the colonies 4 men were attacked. There were no deaths. In India there were 14 attacks and 1 death among men, 2 attacks and no death among women, and no attacks and no deaths among children.

In Egypt there was recorded the admissions of 1 man and 2 women, but there were no deaths. There were also 3 admissions among the troops on board ship. The total numbers are 23 cases and 1 death among men, 4 cases and no death among women. There were no cases among children. The ratios of attacks to strength are for men ·11, for women ·27, and for children *nil* per 1,000; and the ratios of mortality are for men ·01 per 1,000, for women *nil*, and for children *nil*. In the preceding year the ratios of prevalence among men, women and children were ·18, ·59, and ·33 respectively, and the ratio of mortality for men ·02 per 1,000.

ON THE RECRUITING OF THE ARMY.

The Annual Returns of Principal Medical Officers show that the number of recruits inspected during the year was 61,322; of these, 23,231, equal to a ratio of 378·83 per 1,000, were rejected as medically unfit for further service; the remainder, 38,091, or 621·17 per 1,000, were found fit for the service.

The subjoined table shows the number inspected, the number rejected, and the ratios of rejections per 1,000 examined:—

TABLE I.

Number of Recruits Inspected.	Number Rejected.			Ratio of Rejections per 1,000 inspected.		
	On Inspection.	Unfit within Three Months of Enlistment.	Total.	On Inspection.	Unfit within Three Months of Enlistment.	Total.
61,322	22,910	321	23,231	373·60	5·23	378·83

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It will be noticed that of the total number of men found unfit for service there were 321, who having originally passed, were, within three months of their enlistment, found unlikely to become efficient soldiers. These recruits were forthwith discharged under the provisions of para. 124 L. (*d*), Section XIX., Queen's Regulations and Orders for the Army, as all recruits pass through a period of probationary training before final acceptance. Excluding these, the number of men rejected on inspection was 22,910, or 373·60 per 1,000.

Compared with corresponding results in the previous year, a decrease of 18·54 per 1,000 is observed in the ratio of rejection on inspection, also a small decrease, ·06 in the ratio of rejection of recruits within three months of enlistment. The total ratio of rejection has declined, therefore, by 18·60 per 1,000, the ratio of men found fit for the service having increased by the same amount.

The native countries of recruits, the ratios of rejection, and the proportion per 1,000 furnished by each country are given in the following table:—

TABLE II.

Native Countries of Recruits.	Number Inspected.	Number Rejected.	Ratio Rejected per 1,000 Inspected.	Proportion per 1,000 Recruits furnished by each Country.
England and Wales - - -	48,466	18,665	385·11	790
Scotland - - - - -	5,048	1,719	340·53	82
Ireland - - - - -	7,090	2,619	369·39	116
British Colonies and Foreign Countries - - - - -	718	228	317·54	12
Total - - -	61,322	23,231	378·83	1,000

Compared with the similar return for the preceding year the ratio of rejection of recruits born in England or Wales has decreased by 16·76, that of recruits born in Scotland by 55·25, that of recruits born in Ireland by 1·01, and that of recruits born in British Colonies or Foreign countries by 86·04.

Of 1,000 recruits inspected 790 were natives of England or Wales, 16 more than in the preceding year, 82 were natives of Scotland, one less than in 1890, 116 were natives of Ireland, a decrease of 10, and 12 were born in the British Colonies or Foreign countries, a decrease of 5 from the number in the preceding year.

In the next table are shown as far as possible the number of recruits examined for each arm of the service, the number rejected, the ratios of rejection, and the proportion for each arm of the service per 1,000 inspected. A large number, however, are shown under the head of General Service, as the particular arm is not stated in the returns from the Recruiting Depôt, St. George's Barracks, London,

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TABLE III.

Arms of the Service.	Number Inspected.	Number Rejected.	Ratio of Rejections per 1,000 of Recruits Inspected for each Arm of the Service.	Proportion for each Arm of the Service per 1,000 Inspected.
Household Cavalry - - -	399	154	385·96	6
Cavalry of the Line - - -	4,269	1,612	377·60	70
Royal Artillery - - -	7,371	2,786	377·97	120
Royal Engineers - - -	1,196	439	367·06	20
Foot Guards - - - -	2,230	788	353·36	36
Infantry Regiments - - -	34,328	13,250	385·98	560
Departmental Corps - - -	1,596	620	388·47	26
General Service - - -	9,933	3,582	360·62	162
Total - - -	61,322	23,231	378·83	1,000

Compared with the corresponding return for the preceding year an increase of 17·19 has taken place in the ratio of rejection for the Household Cavalry, and one of 7·50 in that for the Engineers. In all other arms of the service a decrease in the ratio of rejection has occurred, being 20·44 in the case of the Cavalry, 36·68 in the Artillery, 31·63 in the Foot Guards, 2·73 in the Infantry, 32·42 in Departmental Corps, and 51·92 in the ratio of rejection for General Service.

The proportion of recruits for each arm of the service per 1,000 inspected, when compared with the corresponding return for the previous year, shows that for the Household Cavalry no change has taken place, but in the Cavalry there was an increase of 6, in the Foot Guards an increase of 3, and in the Infantry regiments an increase of 41, while in the Artillery a decrease of 33 is observed, in the Engineers a decrease of 3, in Departmental Corps a decrease of 2, and in the proportion of recruits enlisting for General Service a decrease of 12.

In the following table are shown the occupations of recruits prior to enlistment, the ratio rejected per 1,000 of each group of occupations, and the proportion of each group in every 1,000 men inspected :—

TABLE IV.

Occupations of Recruits.	Number Inspected.	Number Rejected.	Ratio Rejected per 1,000 Inspected.	Proportion of each Group in 1,000 Recruits Inspected.
1. Labourers, Servants, Husbandmen, &c.	39,230	14,913	380·14	640
2. Manufacturing Artizans (as Clothworkers, Weavers, Lace Makers, &c.).	9,715	3,988	410·50	158
3. Mechanics employed in Occupations favourable to physical development (as Smiths, Carpenters, Masons, &c.).	6,636	2,506	377·64	108
4. Shopmen and Clerks - -	3,471	1,283	369·63	57
5. Professional Occupations, Students, &c.	631	233	369·25	10
6. Boys - - - - -	1,639	308	187·92	27
Total - - -	61,322	23,231	378·83	1,000

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Compared with a similar table for the previous year it will be observed that there is a decrease of 16·71 per 1,000 in the ratio of rejection in Class I., labourers, &c., one of 27·55 in Class II., manufacturing artizans, &c., one of 14·56 in Class III., mechanics, &c., one of 33.48 in Class IV., shopmen and clerks, and one of 44·80 in Class V., professional occupations; but there is an increase of 23·82 per 1,000 in the ratio of rejection in Class VI., boys under seventeen years of age. *United Kingdom.*

The proportions of the different classes of occupations among 1,000 recruits inspected compared with those for the preceding year show an increase of 19 in Class I., labourers, &c., but a decline of 9 in Class II., manufacturing artizans, one of 7 in Class IV., shopmen and clerks, one of 2 in Class V., professional occupations, one of 1 in Class VI., boys, while in Class III., mechanics, no change has taken place in the proportion.

The following table gives the number of recruits rejected on inspection during the year according to the different causes of rejection arranged in classes, and the ratio per 1,000 of rejection in each class. Similar information is given regarding recruits unfit within three months of enlistment:—

TABLE V.

Causes of Rejections in Classes.	Total inspected, 61,322.			
	Number rejected on Inspection.	Ratio per 1,000 rejected on Inspection.	Unfit within Three Months of Enlistment.	Ratio per 1,000 rejected as Unfit within Three Months of Enlistment.
1. Syphilis	299	4·88	1	02
2. Scrofula	209	3·41	2	·03
3. Tubercle	55	·90	8	·13
4. Impaired Constitution and Debility.	1,128	18·40	30	·49
5. Other General Diseases	143	2·33	17	·28
6. Diseases of Nervous System	41	·67	30	·49
7. Weakness of Intellect	134	2·19	47	·77
8. Defective Vision	2,474	40·35	8	·13
9. Diseases of Eyes and Eyelids	117	1·91	3	·05
10. Diseases of Nose and Mouth	66	1·08	—	—
11. Disease of Ears	154	2·51	8	·13
12. Deafness	95	1·55	7	·11
13. Impediment of Speech	109	1·78	2	·03
14. Disease of Heart	985	16·06	37	·60
15. Disease of Arteries (Aneurysm)	5	·08	—	—
16. Disease of Veins (Varix)	1,005	16·39	5	·08
17. Disease of Lungs (except Tubercle).	59	·96	4	·06
18. Loss or Decay of many Teeth	667	10·88	3	·05
19. Hernia	454	7·37	14	·23
20. Laxity of Abdominal Rings	114	1·85	2	·03
21. Hæmorrhoids	93	1·52	—	—
22. Diseases of the Urinary Organs	37	·60	4	·06

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United Kingdom.

Causes of Rejections, in Classes.	Total inspected, 61,322.			
	Number rejected on Inspection.	Ratio per 1,000 rejected on Inspection.	Unfit within Three Months of Enlistment.	Ratio per 1,000 rejected as Unfit within Three Months of Enlistment.
23. Varicocele	793	12·93	9	·15
24. Other Diseases of the Genital Organs (not Syphilitic).	109	1·78	2	·03
25. Defects of Upper Extremities, from Fracture, Contraction, Luxation, &c.	337	5·50	8	·13
26. Defects of Lower Extremities, from Fracture, Contraction, Luxation, &c.	955	15·57	15	·24
27. Flat Feet	677	11·04	9	·15
28. Diseases of Joints	108	1·76	2	·03
29. Other Affections of Bones and Muscles.	98	1·60	1	·02
30. Ulcers, Wounds, and Cicatrices	141	2·30	5	·08
31. Other Affections of the Cutaneous System.	241	3·93	3	·05
32. Malformation of Ears	12	·20	—	—
33. Malformation of Nose and Mouth	15	·25	—	—
34. Malformation of Chest and Spine	461	7·52	6	·10
35. Malformation of Urinary or Genital Organs.	40	·65	1	·02
36. Under Height	1,641	26·76	1	·02
37. Under Chest Measurement	5,705	93·03	16	·26
38. Under Weight	1,991	32·47	—	—
39. Apparent Age not in accordance with Regulations.	591	9·64	1	·02
40. Not likely to become efficient	525	8·56	10	·16
41. Over height	27	·44	—	—
Total Rejected	22,910	373·60	321	5·23

Examination of this return will show that a considerable number of the rejections on inspection were caused by defective development, the ratio of rejection on this account only, being 152·26 per 1,000, but this compared with the corresponding ratio for the previous year shows a decline of 18·38, which rate was in its turn lower than the rate in 1889 by 36·54. The highest ratio of rejection was 93·03 per 1,000, on account of chest measurement; but this is lower than the similar rate in the previous year by 8·42. The ratio of rejection for being under weight, 32·47 per 1,000, has declined by 11·62, but the ratio of rejection for being under height, 26·76 per 1,000, has increased by 1·66. Among other causes of rejection the most frequent was, as usual, defective vision, 40·35 per 1,000, and is increased by 2·31 as compared with the previous year's ratio. The next most frequent cause of rejection was debility, the rate being 18·40 per 1,000, followed by disease of veins 16·39, cardiac disease 16·06, defects of lower extremities 15·57, varicocele 12·93, flat feet 11·04, and loss or decay of many teeth 10·88 per 1,000. These causes of rejections are generally the most frequent in any year, but the order of frequency and the ratios themselves vary from year to year. Among the recruits found unfit within three months after enlistment were 47 for weakness of intellect, 37 for disease of the heart, and 30 each for debility and nervous affections. In previous years these were also the most frequent causes of rejections among this class of recruits.

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Ages, Heights, Weights, and Chest Measurements of all Recruits finally approved for Service during the Year. *United Kingdom.*

In Table No. VI. are given the ages of all recruits finally approved for service, and the proportion of each age per 10,000:—

TABLE VI.

Ages.	Numbers finally approved for Service.	Proportion per 10,000.
Boys under 17 years - - - -	1,371	360
From 17 to 18 „ - - - -	670	176
„ 18 to 19 „ - - - -	18,098	4,751
„ 19 to 20 „ - - - -	7,310	1,919
„ 20 to 21 „ - - - -	3,803	998
„ 21 to 22 „ - - - -	2,463	647
„ 22 to 23 „ - - - -	1,834	481
„ 23 to 24 „ - - - -	1,249	328
„ 24 to 25 „ - - - -	997	262
25 years and upwards - - -	296	78
Total - - -	38,091	10,000

From the above it will be seen that very nearly half, 47·5 per cent., of the recruits passed fit for service in the army were between 18 and 19 years of age; in the preceding year the proportion was 48·9 per cent. Of the age between 19 and 20 years the per-centage of men passed fit for the service was 19·2, and of the age between 20 and 21 years it was 10·0; in the preceding year the corresponding proportions was 19·7 and 9·3.

The next table shows the heights of recruits finally approved, and the proportion of each height per 10,000. It also gives the heights of recruits finally approved, arranged in series according to age, together with the proportion per 10,000 of each height at each age:—

TABLE VII.

Heights of Recruits finally approved for Service.	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	Total at each Height.
ft. in. ft. in.											
Under 5 3 -	1,138	68	201	52	23	3	1	4	2	5	1,497
5 3 to 5 4 -	119	140	2,747	667	209	133	83	35	35	10	4,178
5 4 o 5 5 -	53	155	4,500	1,503	650	425	301	186	111	29	7,913

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United Kingdom.

Heights of Recruits finally approved for Service.	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	Total at each Height
ft. in. ft. in.											
5 5 to 5 6 -	33	101	4,145	1,521	773	491	340	228	203	52	7,887
5 6 to 5 7 -	11	93	2,693	1,226	730	466	378	238	178	59	6,072
5 7 to 5 8 -	12	58	1,901	1,050	544	368	273	200	160	48	4,614
5 8 to 5 9 -	3	36	1,057	622	418	255	215	164	139	35	2,944
5 9 to 5 10 -	1	13	498	400	222	174	123	103	79	28	1,641
5 10 to 5 11 -	1	6	204	147	119	85	59	50	44	15	730
5 11 to 6 0 -	—	—	106	78	79	43	31	27	24	6	394
6 0 and upwards	—	—	46	44	36	20	30	14	22	9	221
Totals at each age	1,371	670	18,098	7,310	3,803	2,463	1,834	1,249	997	296	38,091

Heights of Recruits finally approved for Service.	Proportions per 10,000 at each Age.										Total Proportion of each Height per 10,000.
	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	
ft. in. ft. in.											
Under 5 3 -	8,301	1,015	111	71	60	12	5	32	20	169	393
5 3 to 5 4 -	868	2,090	1,518	913	550	540	453	280	351	338	1,097
5 4 to 5 5 -	387	2,313	2,487	2,056	1,709	1,726	1,641	1,490	1,113	980	2,077
5 5 to 5 6 -	241	1,507	2,290	2,081	2,033	1,994	1,854	1,825	2,036	1,757	2,071
5 6 to 5 7 -	80	1,388	1,488	1,677	1,919	1,892	2,061	1,906	1,785	1,993	1,594
5 7 to 5 8 -	87	866	1,050	1,436	1,430	1,494	1,488	1,601	1,605	1,621	1,211
5 8 to 5 9 -	22	537	584	851	1,099	1,035	1,172	1,313	1,394	1,182	773
5 9 to 5 10 -	7	194	275	547	584	706	671	825	793	946	431
5 10 to 5 11 -	7	90	113	201	313	345	322	400	442	507	192
5 11 to 6 0 -	—	—	59	107	208	175	169	216	241	203	103
6 0 and upwards	—	—	25	60	95	81	164	112	221	304	58
Total -	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

Compared with a similar return for the previous year it will be seen that the proportion of recruits under 5 feet 3 inches in height per 10,000 approved has decreased by 14, that of recruits between 5 feet 4 inches and 5 feet 5 inches by 48, that of recruits between 5 feet 8 inches and 5 feet 9 inches by 41, that of recruits between 5 feet 9 inches and 5 feet 10 inches by 24, and that of recruits over 6 feet in height by 18; an increase of 46 is, however, observed in the proportion of recruits between 5 feet 3 inches and 5 feet 4 inches in height, one of 2 in that of recruits between 5 feet 5 inches and 5 feet 6 inches, one of 44 in that of recruits between 5 feet 6 inches and 5 feet 7 inches, one of 24 in that of recruits between 5 feet 7 inches and 5 feet 8 inches, one of 10 in that of recruits between 5 feet 10 inches to 5 feet 11 inches, and one of 19 in that of recruits between 5 feet 11 inches and 6 feet in height.

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Omitting boys, under 17 years of age, the highest proportion of recruits at any age of any height per 10,000 finally approved was 2,487 between 18 and 19 years of age, and between 5 feet 4 inches and 5 feet 5 inches in height, the next being 2,313 between 17 and 18 years of age, and between 5 feet 4 inches and 5 feet 5 inches in height. In the preceding year the highest proportion per 10,000 of recruits at any age of any height was 3,008, between 17 and 18 years of age, and between 5 feet 3 inches and 5 feet 4 inches in height, the next being 2,825 at the same age, but between 5 feet 4 inches and 5 feet 5 inches in height. *United Kingdom.*

The next table shows the weights of the recruits who were finally approved, and the proportion of each weight per 10,000. It also shows the weights of these recruits arranged in series according to age, together with the proportion per 10,000 of each weight at each age :—

TABLE VIII.

Weights of Recruits finally approved for Service.	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	Total at each Weight.
Under 100 lbs. -	1,106	18	24	1	1	—	1	—	—	—	1,151
100—110 lbs. -	183	107	856	362	19	17	8	6	—	4	1,562
110—120 „ -	68	283	6,418	1,890	493	260	173	80	56	24	9,745
120—130 „ -	10	185	6,723	2,480	1,265	702	492	316	203	51	12,427
130—140 „ -	4	62	3,031	1,679	1,136	737	546	378	279	73	7,925
140—150 „ -	—	14	797	629	599	468	381	271	259	62	3,480
150—160 „ -	—	1	203	204	215	180	158	130	125	43	1,258
160—170 „ -	—	—	42	52	54	84	63	53	52	24	424
Upwards of 170 lbs.	—	—	4	13	21	15	12	15	23	16	119
Totals at each age	1,371	670	18,098	7,310	3,803	2,463	1,934	1,249	997	296	38,091

Weights of Recruits finally approved for Service.	Proportions per 10,000 at each Age.										Total Proportion of each Weight per 10,000.
	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	
Under 100 lbs. -	9,067	269	13	1	3	—	5	—	—	—	302
100—110 lbs. -	1,335	1,597	473	495	50	69	44	48	—	135	410
110—120 „ -	496	4,224	3,546	2,586	1,297	1,056	943	641	562	811	2,558
120—130 „ -	73	2,761	3,715	3,393	3,326	2,850	2,683	2,530	2,036	1,723	3,263
130—140 „ -	29	925	1,675	2,297	2,987	2,992	2,977	3,026	2,798	2,466	2,081
140—150 „ -	—	209	441	860	1,575	1,900	2,077	2,170	2,598	2,095	914
150—160 „ -	—	15	112	279	565	731	862	1,041	1,254	1,419	330
160—170 „ -	—	—	23	71	142	341	344	424	521	811	111
Upwards of 170 lbs.	—	—	2	18	55	61	65	120	231	540	31
Totals at each age	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

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United Kingdom

Compared with the corresponding return in the previous year a decrease of 24 has occurred in the proportion of recruits under 100 lbs. in weight per 10,000 finally approved, one of 297 in that of recruits between 120 and 130 lbs. in weight, one of 100 in that of recruits between 130 and 140 lbs. in weight, one of 25 in that of recruits between 140 and 150 lbs. in weight, one of 11 in that of recruits between 150 and 160 lbs. in weight, and one of 2 in that of recruits over 170 lbs. in weight. The proportion of recruits per 10,000 between 100 and 110 lbs. in weight has increased by 223, that of recruits between 110 and 120 lbs. in weight by 226, and that of recruits between 160 and 170 lbs. by 10.

Omitting boys, the highest proportion of recruits at any age and of any weight was 4,224 among recruits between 17 and 18 years of age, and between 110 and 120 lbs. in weight, the next being 3,715 among recruits between 18 and 19 years of age and between 120 and 130 lbs. in weight. In the preceding year the two highest proportions, 4,187 and 4,086 respectively, were among recruits at the same ages and of the same weights as in the year under report.

In the next table is shown the chest measurements of recruits finally approved, and the proportion of each measurement per 10,000. It also shows the chest measurements of these recruits arranged in series according to age, together with the proportion per 10,000 of each chest measurement at each age.

TABLE IX.

Chest Measurement of Recruits finally approved for Service.	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 22 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	Total at each Chest Measurement.
Under 31 inches -	1,176	50	41	4	2	—	1	1	1	—	1,276
31—32 inches -	123	84	717	111	30	25	6	7	1	1	1,105
32—33 „ -	51	209	3,747	1,054	325	181	114	45	14	17	5,757
33—34 „ -	21	195	7,442	2,559	1,080	632	398	266	155	43	12,791
34—35 „ -	—	99	4,441	2,278	1,314	881	672	427	353	86	10,551
Above 35 inches -	—	33	1,710	1,304	1,052	744	643	503	473	149	6,611
Totals at each age	1,371	670	18,098	7,310	3,803	2,463	1,834	1,249	997	296	38,091

Chest Measurement of Recruits finally approved for Service.	Proportions per 10,000 at each Age.										Total proportion of each Chest Measurement per 10,000.
	Boys under 17 Years.	Between 17 and 18.	Between 18 and 19.	Between 19 and 20.	Between 20 and 21.	Between 21 and 22.	Between 23 and 23.	Between 23 and 24.	Between 24 and 25.	25 Years and upwards.	
Under 31 inches -	8,578	746	23	5	5	--	5	8	10	—	335
31—32 inches -	897	1,254	396	152	79	101	33	56	10	34	290
32—33 „ -	372	3,119	2,070	1,442	855	735	622	360	140	574	1,511
33—34 „ -	153	2,910	4,112	3,501	2,840	2,566	2,170	2,130	1,555	1,452	3,358
34—35 „ -	—	1,478	2,454	3,116	3,455	3,577	3,664	3,419	3,541	2,905	2,770
Above 35 inches -	—	493	945	1,784	2,766	3,021	3,506	4,027	4,744	5,035	1,736
Total -	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000

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Compared with the return for the preceding year a decrease of 22 has occurred in the proportion of recruits under 31 inches chest measurement, one of 146 in the proportion between 34 and 35 inches chest measurement, and one of 78 in that of recruits over 35 inches chest measurement. The proportion of recruits between 31 and 32 inches chest measurement has increased by 20, that between 32 and 33 inches chest measurement by 202, and that between 33 and 34 inches by 24. *United Kingdom*

Omitting boys, the highest proportion of recruits at any age and of any chest measurement was 5,035 among men of 25 years of age and upwards and over 35 inches chest measurement, the next being 4,744 among men between 24 and 25 years of age, and of the same chest measurement. In previous years the highest proportions were found at these ages; they are, however, dependent on comparatively few inspections. Taking the age at which the greatest number of recruits are examined, it is found that the highest proportion per 10,000 was 4,112 between 33 and 34 inches chest measurement, as compared with 4,158 at the same age and chest measurement in the previous year.

From the foregoing tables it has been calculated that, excluding boys under 17 years of age, the average age of recruits finally approved during the year was 19·2 years, as compared with 19·1 in 1890, the average height was 5 feet 5·6, inches, the same as in the previous year, the average weight 122·3 lbs., an increase of 2·3 lbs., and the average chest measurement 33·4 inches, as compared with 33·5 inches in the preceding year.

The next table shows the state of education of recruits finally approved, together with the proportion per 1,000 of those well educated, able to read and write, able to read only, or unable to read.

TABLE X.

	Numbers finally approved.	Proportion per 1,000.
Well educated - - - -	2,243	59
Able to read and write - - -	33,717	885
Able to read only - - - -	845	22
Unable to read - - - -	1,286	34
Total - - - -	38,091	1,000

Compared with the corresponding table for the preceding year a decrease of 25 per 1,000 has taken place in the proportion of recruits returned as well educated, one of 3 in that of recruits able to read only, and one of 7 in that of recruits unable to read, but there is an increase of 35 in the proportion of recruits returned as able to read and write.

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United Kingdom.

HOME STATIONS.

Sanitary Conditions of Districts and Stations.

North-eastern District.

The Principal Medical Officer, Surgeon-Colonel J. Y. Donaldson, M.D., reports that the general health of the troops was good during the year, and, but for the epidemic of influenza and the diseases consequent thereon, would have been much more satisfactory than in the previous year. The sanitation of the various barracks was carefully attended to, and any defects were brought to notice. At York the surface drainage of the regimental block, infantry barracks, flows into a ditch in a neighbouring field, and has been found a nuisance; a scheme has therefore been submitted for protecting the surface water from pollution, which will, it is believed, remove cause of complaint. At Newcastle-on-Tyne the surface drainage of the infantry parade, as well as about some of the married quarters, was also found to be defective; this condition was brought to notice and was about to be remedied. At Bradford the subsoil is wet, and immediately outside the barrack wall, on one side, are two large ponds; apart from this the sanitary conditions are satisfactory. The medical officer reports that the hospital is old and requires constant repair, and being a wooden hut is difficult to warm in winter; it is thought that, considering the exposed condition of the barracks, a stone building should be erected as a hospital. At Sunderland it is reported that the barracks and hospital are old, and that the sanitary arrangements of the former are of a primitive kind. The neighbourhood on two sides is not good, the houses being of a low class; it is stated that the barracks are about to undergo some modification, and to be handed over to the Militia. At Lincoln the medical officer states that the water supply is occasionally of indifferent or even bad quality, and can never be said to be more than fair. When the supply from the ponds becomes deficient it is supplemented by filling them up from the adjacent river, which is of inferior quality, and it is much to be regretted that it is necessary to use this water at all. At Beverley the dry earth system of conservancy is in use for the latrines and works well. The Principal Medical Officer remarks that it is about to be changed for sewerage, a rearrangement which does not meet with his approval. At Leeds the barracks are said to be very old, but are about to be reconstructed. The sanitary arrangements generally are, however, stated to be very good. At Sheffield the arrangements, from a sanitary point of view, are generally good, but there was some difficulty in sufficiently warming the rooms in very severe weather. The water supply to the lavatories is unsatisfactory, and some baths required repairing or replacing; these points were represented. At Strensall Camp the sanitary conditions were generally good; but the arrangements for baths were not found sufficient. At Leicester the surface drainage has undergone improvement in parts of the barracks, but more is yet required, and will be carried out. With regard to the barracks they are said to be satisfactory, but cold in winter, and difficult to warm. Speaking generally of water supply to barracks and hospitals the Principal Medical Officer remarks that, while the amount which should be allowed per head in quarters is laid down in regulation there is nothing defined as to the allowance for hospitals, and he suggests that a scale should be drawn up for the latter.

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North-western District.

United Kingdom.

Surgeon-Colonel A. A. Gore, M.D., Principal Medical Officer, reports that the health of the troops during the year was good; that the general sanitary condition of quarters was satisfactory, and that no localised causes of disease could be traced. At several stations the buildings are old and faulty in construction, but have been improved from time to time as far as practicable. The warming of the hospitals is being improved by the introduction of Gurney's radiating stoves, and the closure of some of the windows, or by providing double sashes. The regulation married quarters do not, it is said, afford sufficient space for large families, and whenever possible additional rooms are assigned. In barracks Musgrave's stoves are being gradually introduced, and will ultimately replace the present ventilating grate. They have a small chamber for keeping warm some portion of the men's diets. The ventilation, as a rule, is satisfactory, and by greater attention to detail in respect to warming apparatus, cells and guard-rooms have been made more comfortable. The facilities for ablution are upon the whole satisfactory; but Jenning's patent is objected to as not resisting rough usage, and will be gradually replaced by slate benches and basins, which will reduce the charge for barrack damages. Where necessary the drainage is being improved, and any requirements are being put forward in the annual estimates. In the large towns the immediate surroundings of the barracks are bad. Many of the brigade depôt buildings of later construction are situated in the open country, and are in all respects superior. The water supply is derived, as a rule, from local waterworks companies, and the quality is good. There was some temporary deficiency at Lichfield. The cooking was generally good, and the rations satisfactory as to quality. Where there are gymnasia the effect of the training and physical drill exercises have exercised a beneficial influence on health. A representation that the material for the winter clothing of the recruits should be of heavier make was put forward, and is under consideration. Of the barracks in the Command those at Lancaster, Preston, Seaforth, Lichfield, Warwick, Worcester, Wrexham, and Shrewsbury are well built, and most satisfactorily situated. Those at Warrington are on low-lying ground and difficult of drainage. The pail system here, which was tried experimentally, was found to answer very well under arrangements with the Corporation, and is now in general use. Additional married quarters are still wanting in several of the barracks; and in several of the hospitals there are no isolation or prisoners' wards, or fumigating chambers. At most stations special accommodation is necessary to allow of greater privacy in the examination of recruits. In addition to those above mentioned there were numerous improvements required at different stations, many of which were to be shortly carried out, such as the improvement of surface drainage, provision of sculleries to married quarters, improvement of drainage by substitution of pipes for old masonry drains, and several other similar services.

Eastern District.

The Principal Medical Officer, Surgeon Colonel C. Hervé Giraud states in his report that the health of the troops in his district was satisfactory during the year, and there was no unusual sickness, and in no case was a disease found to have been caused by any local sanitary defect. The sanitation of the several stations was carefully attended to. The medical officer in charge at Bedford reports that a patent self-acting syphon flushing tank was erected during the year, which it is thought will complete the correction of any sanitary defect in the sewers. Some improvements were about to be undertaken in the sanitary condition of the neighbourhood of barracks. At Bury St. Edmund's the barracks were kept in a fair sanitary condition, but it is stated that the warming of the rooms in the very cold weather was very difficult. The supply

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of hot water to the lavatories, especially in winter has been recommended. At Colchester the whole of the drains in the cavalry barracks were taken up and re-modelled during the year, and the drainage of the camp was thoroughly examined. At the station hospital the accommodation was sufficient for all purposes, but the huts are old and a good deal of labour is required to keep them clean and in good order. A covered passage to the latrines and wash house is mentioned as a desirable improvement. Among services performed during the year, the laying on of water to several of the women's washhouses has been carried out. At Harwich the general sanitary conditions of barracks were reported to be satisfactory, but the water in the well at the Circular Redoubt was condemned during the year for drinking purposes, and the supply is at present obtained from the town works by means of water carts. At Landguard Fort the position of the station is low lying and difficult to drain, as the huts are below high-water mark and protected by a concrete embankment on the shore line. The general sanitary condition of the barracks is good, though some of the rooms in the fort do not give the regulated amount of space; the ventilation, however, is good. At Northampton the water supply, which formerly was not so good as it might have been, is now satisfactory, some filtering beds having been completed. At Norwich the general sanitary condition of the barracks is stated to be good, and that of their vicinity to be also satisfactory, with the exception of a lane at the back. The report from Warley is also satisfactory as to the general sanitary state of barracks, but complaints arose as to means of warming and to some extent as to the lighting. At Weedon the artillery barracks are old, the rooms are dark, and the windows wrongly placed for natural ventilation; the rooms in the infantry barracks are more cheerful looking and apparently of later construction. Some improvements have been effected in the drainage of the barracks and that of the station hospital has been put into communication with the main drainage. At Great Yarmouth hospital accommodation was insufficient during the militia training, but the sanitary conditions were otherwise satisfactory.

Western District.

Surgeon-Colonel J. B. Hamilton, M.D., Principal Medical Officer, reports that the general health of the troops during the year was on the whole satisfactory, and that the sanitation of the various stations was good generally. It is mentioned, however, that the condition of the Citadel barracks, Plymouth, is bad; but this was made the subject of a special report. The state of the Millbay barracks was not as satisfactory as it might be. The forts around Devonport and Plymouth are said to be in good order, but there was some difficulty in working the dry-earth system satisfactorily. The barracks in the district were generally in good order, and only in a few instances was there any overcrowding, and this of a temporary character. Ventilation and lighting was generally satisfactory. The quarters for married soldiers were generally in good order, but those in the Citadel are in some cases small, and in the instance of large families over-crowded. The hospitals throughout the district were all in a very satisfactory state, and great care was bestowed on them by medical officers. The station hospital at Devonport is an old building and requires a good deal to be done to it to bring it up to modern requirements. The infectious wards are sufficient and satisfactory, and the hospital for soldiers' wives and children is in excellent order. The water supply is good on the whole, and generally from town water works in the vicinity, but in some of the forts it is from wells. The quality of the rations was generally good and the cooking satisfactory. In certain stations, especially at Horfield, a great deal of trouble was taken to vary the food and with the soldier's diet generally. The cook-houses were in some instances rather out of repair, but these defects were all brought to notice. Among the reports from medical officers in charge of station hospitals several requirements are mentioned, such as at Brecon, though the sanitary conditions are generally good, the front block of married quarters are insufficiently warmed, and a recommendation

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was put forward for the provision of a second fireplace. At Cardiff the waste pipe from men's bath-room was made to discharge over a surface drain instead of into a closed one; and closet and lavatory arrangements were undertaken for the infectious wards. At Devonport in the South Raglan Barracks it is stated that the means of ablution are rather poor, there being only two bath rooms and no hot water laid on; improvement in this direction was recommended. At the Citadel also the lavatories were not in good repair. At Exeter a new prisoner's room was provided behind the existing guard-room. At Pembroke Dock there are in the encampment twelve brick huts and nineteen wooden huts, the sanitary conditions are generally good, but the former are preferable as being warmer and less draughty. Some new cells are required, the present ones being small and dark, *United Kingdom.*

Southern District.

The Principal Medical Officer, Surgeon Major-General S. A. Lithgow, M.D., C.B., D.S.O., reports that the health of the troops in the district was good during the year. The sanitary condition of the several stations was generally good. Among the points requiring mention in the medical officers' reports were the following. At Christchurch a large filter fitted into the reservoir which supplies the troops with water requiring filtration was recommended, instead of the existing small filters at present in use in the barracks. At the new barracks Gosport foul odours emanate from the moat surrounding them at low water; the matter has been brought to notice. It is thought by the medical officer in charge that the new system of issuing fuel does not sufficiently meet the requirements of the barrack rooms and married quarters. At Golden Hill Fort the culvert leading to the cesspit was found defective, and a new one was about to be laid down. The position of the hospital in the fort is unsatisfactory, the latrines and urinals being adjacent. A site for a new hospital outside the fort has now been chosen. At Marchwood great difficulty was experienced in effectively flushing the main sewer open into Southampton water, owing to the low gradient, the action of the tide and insufficient flushing power. At Portland it is found that the station hospital is scarcely suitable to its purpose, being part of the casemated barracks, close to the guard room, and the principal thoroughfare to and from barracks. At Winchester the ventilation is as good as can be in old buildings, but is not as perfect as could be wished. The following are the most important sanitary improvements which were effected during the year:—At Hilsea the cubic space in cells was increased, and drainage substituted for cesspit in some officers' quarters. At Tipnor improvement made in latrines. At Portsmouth the latrines in the Anglesea barracks were reconstructed, also the drainage in the Cambridge barracks. At Gosport the drainage of the station hospital was improved, the waste pipes from baths at Fort Grange were made to open in the air, the surface drains relaid, and waterclosets ventilated. At Forts Brockhurst and Rowner the same improvements to surface drainage and to the wastes from baths were effected. At Winchester some new cook houses were provided at the depôt barracks. At Golden Hill Fort, staff sergeants' quarters provided with Doulton's closet, slate benches in ablution rooms removed, and the water supply as well as the drainage improved. At Fort Victoria the officers' quarters were provided with Doulton's closet, and the men's latrines with extracting shafts. At Sandown Fort the old brick drain was disconnected from the main and replaced by earthenware pipes; and three bedrooms in married quarters supplied with fire places. At Parkhurst the insanitary condition of laundry drying room floor was remedied, a store was converted into an ablution room, and the prisoners' room was enlarged.

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Netley.

The Principal Medical Officer, Surgeon-Colonel A. M. Tippetts, shows in his annual return that the sanitary conditions of the Royal Victoria Hospital were in a satisfactory state throughout the year. There was no overcrowding. The ventilation of the wards was efficient, and the warming and lighting were satisfactory. The barracks of the men of the Medical Staff Corps, situated in a range of buildings parallel to, and in the rear of the hospital, were also in a good sanitary state as regards these particulars. The drainage of the hospital generally, and the conservancy of the buildings and their vicinity were generally satisfactory, and any defects which arose from time to time were at once brought to notice and remedied. The water supply was good in quality and sufficient in quantity. The ablution arrangements for the hospital and for the men's barracks were in good order, and in a satisfactory sanitary condition, and no defects are reported to have arisen. The means of cooking were good and satisfactory.

The medical officer in charge of the lunatic asylum reports that the sanitary condition of the buildings was well maintained. At the commencement of the year all the soil pipes were removed from the inside to the outside of the building, and were continued well up above the eaves. The pipes communicate below with intercepting pits, so that sewer gas cannot possibly be conveyed inside. All wastepipes were made to discharge into the open air over gratings. The hospital was painted externally after an interval of four years. No structural changes were effected, but any defects were made good from time to time. The water supply was satisfactory; the heating apparatus efficient, and the baths adequately supplied with hot and cold water.

Thames District.

The Senior Medical Officer of the district, Brigade-Surgeon Lieut.-Colonel W. H. B. Clapp, M.D., reports that the general health of the troops during the year was good, and compares favourably with that in the preceding year, the ratios of sickness showing a considerable decrease, though there was an increase in the death rate, due in some measure to the number of accidental and violent deaths which occurred. Among the causes which affect the health of the troops in the district may be mentioned the prevalence of cold east winds and fogs in the early and late parts of the year at Chatham, and the sudden variations of temperature which frequently occur at all seasons at that station, also the cold, damp, and exposed position of Sheerness, which is built on marshy ground at the junction of the rivers Thames and Medway; both of the foregoing conduce to the prevalence of rheumatic, pulmonary, and throat affections. The following were among the leading sanitary improvements effected during the course of the year. The drainage of Upper Chatham barracks was reconstructed on the most approved principles; the drainage of the detached staff serjeants' quarters, near Chatham barracks was re-modelled, and a portion of the drainage of the married soldiers' blocks, and a portion of that of Brompton barracks were reconstructed. At St. Mary's barracks, Chatham, the drainage of the cook-house was re-modelled, and the sinks generally were cut off from direct communication with the sewers. The ventilation and lighting of some of the men's casemates in these barracks were improved by the introduction of large windows at the further ends, and by the construction of additional air shafts. The officers' mess and officers' quarters were similarly treated. At Maidstone a new slate bath, with water laid on, was added to the ablution accommodation for the new block of barracks, and additional water taps were provided in the ablution rooms of these barracks. The north and south lavatories, for the use of the old portion of the barracks, as well as the baths for the same, were also improved by having water laid on in pipes. At the station hospital flush-out closets were substi-

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tuted for the old pattern ones. At Sheerness the ventilation of the branch canteen was improved; the ablution bench in the provost cells was roofed in and water laid on, and the urinal was reconstructed. Grain Fort and Slough Fort were reconstructed, and afford ample accommodation. Grain Tower was dismantled and left unoccupied. At Shoeburyness a new deep well was sunk in order to provide a better supply of water; some of the old latrines were replaced by more modern appliances fitted with annular flushing apparatus, and flush-out closets were substituted for old pattern ones in the officers' and staff sergeants' quarters and in the station hospital. At Gravesend the drainage in the forts was partly relaid, and an estimate was prepared for completely reconstructing the drainage in barracks. The want of an infectious ward at the station hospital is mentioned by the medical officer in charge. *United Kingdom.*

South-eastern District.

Surgeon Major-General G. L. Hinde, C.B., Principal Medical Officer, states in his annual report that there was a general improvement in health throughout the district during the year. The sanitary condition of the various stations was generally satisfactory, and the amount of disease from preventible causes was extremely low. With regard to the maintenance and improvements of sanitary conditions throughout the district, the Principal Medical Officer remarks that the details of drainage, such as traps, intercepting pits, and immediate connexion between drains and dwellings, were given every attention. Permanent additions to barrack accommodation were made in the western outworks of the Citadel, at the Castle, Dover, and in both infantry and cavalry lines at Shorncliffe. In all places where increased or new accommodation was built, the subsidiary buildings such as kitchens, lavatories, bread and meat stores, workshops were erected on the newest plans, and they fulfil all general requirements as to sanitation. The casemate barracks in Dover Castle were considerably improved by partitions being placed across these long dark dwellings which were draughty and cold, and although ventilation has been secured by a trap in the upper part of the partitions the great draught has been cut off from the front part, which makes now a comfortable light barrack room. The reduced accommodation is balanced by the new permanent huts, and those parts of the casemates at present cut off are still available for any emergency as heretofore. At Canterbury the trapping of drains near the stables has further improved the system. Some large wards in the station hospital were made more comfortable and improved by the introduction of large stoves; an equable temperature is now more easily obtained. At Hythe the lavatories, latrines, and drainage systems had considerable attention and are much improved. At Eastbourne the barrack accommodation in the fort was remodelled, and the hospital for many years used as a barrack by the permanent staff of the militia re-opened for the treatment of sick, and for the reception of convalescent patients as required. At Holmstone Camp, Lydd, it has been proposed that brick huts should be erected with a view to the station being utilised throughout the year. The medical officer lately in charge expresses his opinion that so low-lying a place is not suited for permanent barracks, as the drainage would probably be defective. He also brings to notice that the dykes about the camp and the town of Lydd are little better than open sewers; the Principal Medical Officer states his opinion that there is much in the view brought to notice. With regard to the ration of the troops it is stated that increased attention is being paid to the soldiers' meals, the cooking is good and the food more varied, and this satisfactory result has been attained by better superintendence and absence of waste, without much extra expenditure, if any.

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Home District.

Surgeon Colonel Robert Lewer, the Principal Medical Officer, states that he is able to report very favourably on the sanitary conditions of the barracks and hospitals of the several stations, and on the completion of measures in progress the sanitary wants of the district will have been met, short of the defects in site and construction of several old buildings. During the early part of the year there was some overcrowding at Kingston, which was remedied by discontinuing recruiting for the militia for a time. At Oxford and Hounslow there was difficulty in warming the rooms sufficiently in severe weather. At St. John's Wood the sanitary condition of the barracks was found to be unsatisfactory particularly as regards surface drainage and latrines; these points were remedied. The ablution accommodation was found to be insufficient, and further facilities were therefore afforded. Among the leading improvements effected during the year were the following: At Caterham the foul sewerage and surface drainage were disconnected, being now two distinct systems. A new system for the disposal of sewage at the adjacent lunatic asylum having been adopted, the smell from the sewage farm is no longer a subject of complaint. At the Tower of London the entire drainage system is being remodelled. The married quarters in the old hospital block have been improved by new verandahs. At Oxford the main drain at the west corner of the barracks was ventilated by a shaft, and disconnected from the town drainage system. At Kingston-on-Thames a separate cistern was provided for flushing the latrines and the rain-water pipes were disconnected from the drains throughout the barracks. In London at Chelsea barracks the drainage of lavatories was improved, three additional officers' quarters built, and disconnecting pits and drains in process of construction. At Kensington barracks water laid on and sinks provided to each landing of the married quarters; surface drainage of stables about to be relaid. At Wellington and St. George's barracks rain-water pipes disconnected from drains. The station hospital, Rochester Row, was again found insufficient and overcrowding was avoided with difficulty, the surplus sick being transferred to Woolwich, Reading, or Hounslow. The barracks at Regent's Park were in process of reconstruction, and at Hyde Park barracks the ventilation of the prisoners' room was improved. At Hampton Court the rain-water pipes were disconnected from the drains, and the cesspits in front of barracks removed to a greater distance. At Hounslow the main drain was fitted with self-acting flushing syphons. The question of the water supply to the barracks as well as to the town received attention. At Windsor in the Victoria barracks the soil pipes of waterclosets were removed to outside of buildings and waste pipes from sinks and baths made to discharge over surface traps. The town sewer passing under barracks was ventilated, manholes built in it, and the ground below the floors of the rooms under which this sewer passes was concreted. At the Spital barracks the drains were disconnected from the town sewer, and soil pipes moved to outside of buildings. At Guildford cisterns provided for flushing purposes and ventilation of drainage improved. At Kneller Hall the lake in the grounds was still polluted with sewage from a neighbouring farm, but the subject was being dealt with.

Woolwich District.

The Principal Medical Officer, Surgeon-Colonel P. Broke-Smith, M.D., reports that the health of the troops was, generally speaking, very good. Influenza was prevalent in the spring, but so it was all over the country, and it could be in no wise attributed to local defects. Scarlet fever was less prevalent than in the previous year; it was of mild type, the origin of every case was inquired into, but could not be traced to any defect in sanitation. Suggestions which appear necessary to improve the health of the troops were made as occa-

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sion required, and always received prompt attention on the part of the district authorities. It is stated that no material alteration was made in the construction of the barracks during the year; the rooms were kept clean and in good sanitary condition; warming, lighting, and ventilation were attended to, and there was no over-crowding. Only minor sanitary improvements were carried out. One of the most important, however, was the over-hauling of the drainage of the female hospital, which had been in an unsatisfactory condition, with the result that puerperal septicæmia which at one time existed completely disappeared. The camp huts are old and dilapidated, and it would be well, whenever funds may be available, to replace them by permanent barracks. The married quarters are fairly good, and were kept clean and in as good a sanitary state as practicable. The accommodation, however, is not sufficient for the wants of the garrison, and in consequence a number of families live in lodgings in various parts of the town. The drainage on the whole is satisfactory, but admits of improvement; minor repairs were carried out where necessary. The surface conservancy was attended to and the ground in the vicinity of the barracks kept in good sanitary condition. The water supply for drinking is from the Kent Waterworks and is good and abundant. Thames water stored in a reservoir is used for flushing latrines; during the summer months this water, it is said, sometimes becomes offensive. The rations for the troops were generally good. Great improvement took place in the bread supply, which is now baked in a Government establishment under the superintendence of the Army Service Corps. The sanitary condition of the Herbert Hospital was generally satisfactory as regards ventilation, warming, accommodation, drainage, and water supply; but it is said that a few small wards are much required for the treatment of serious cases requiring quiet and isolation, also a proper ophthalmic ward, but any departure in this respect would necessitate considerable structural alterations. The lighting of the hospital by gas is said to be most unsatisfactory; the matter has frequently been brought to notice. At Purfleet the sanitary condition of the barracks is generally good; some repairs were required to the ceilings to the men's rooms, and it would, it is said, be a boon if in all cases a direct communication were made between the two rooms in a married quarter occupied by the same family. *United Kingdom.*

Aldershot Division.

Surgeon Major-General J. G. Faught, the Principal Medical Officer, reports that the general health of the troops was well maintained during the year. The sanitary state of the camps and permanent barracks was carefully attended to and their general condition was satisfactory. The reconstruction of the camps was proceeded with steadily, and in the North Camp at the close of the year there were forty-four brick huts completed and others in course of construction; these will gradually replace the old wooden huts, which are now old and draughty. In the South Camp also this substitution of brick barrack huts for the old wooden huts was in progress. Ventilation, warming, and lighting is carefully provided, and the new huts appear to be very satisfactory. The water supply for the camp is derived from three sources, the Government reservoirs at Bourley, the Aldershot town waterworks, and from wells; the supply from the first named is good and abundant, from the second also very good, but rather harder than the former; but the water from the wells varies, some of the wells having been found to yield water unfit for drinking and only fit to be used for washing and flushing purposes. The whole of the permanent barracks, except the South cavalry barracks, can now be supplied with water when necessary from the town supply; this, however, can be cut off as long as the supply from Bourley is sufficient. The North and South camps are supplied from the Bourley reservoirs and from wells; but should the former run short, the power exists to turn the town water into the mains in order to make up for any deficiency. The drainage of the camp is said to have been on the whole fairly satisfactory, but repairs were frequently necessary owing to many of the old drains having become defective. With the reconstruction of

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the camp the drainage system will be considerably improved. The station hospitals were kept in a good sanitary condition. In the Cambridge Hospital the only defect noticed was a difficulty of warming the wards above 50° Fahr. in winter beyond the vicinity of the stoves; this was represented, and it is stated that warming the wards with hot water pipes is in contemplation. At the North Camp Hospital the accommodation has slightly decreased owing to the necessity to appropriate two huts as barrack rooms. The sanitary conditions were generally satisfactory, except that it is said that the bath and ablution accommodation is scarcely sufficient; but in view of the probability of a new hospital being shortly erected no recommendations on this subject were put forward. The rations for the troops were generally of very good quality, and the arrangements as regards cooking very satisfactory. Great care was taken to provide variety in the meals issued to the troops with very satisfactory results. At the Royal Military College, Camberley, the sanitary condition of barracks and quarters is reported to have been generally satisfactory.

Channel Islands.

The Senior Medical Officer, Brigade Surgeon Lieut.-Colonel C. S. Close, shows in his annual report that though there was but little mortality during the year there was more sickness than in the previous year, and that this was chiefly due to an increased prevalence of venereal disease. The sanitary conditions are generally favourably reported on. As to barracks it is stated that almost every type is to be met with in these islands, from casemates having doors and windows at one end only, and attics accommodating no more than three men to rooms of more modern and approved construction; nevertheless the health of the occupiers is satisfactorily maintained, and no causes of diseases traceable to the existence of defects in sanitation have been discovered. The water supply is derived from sources varying at the different stations, but chiefly from wells, which are in all instances properly protected from pollution; but at Elizabeth Castle and St. Helier's Station Hospital it is obtained from the town waterworks. At Alderney the supply from springs is supplemented by rain water stored in tanks, but as a rule the latter is only used for flushing and washing purposes. The methods of sewage removal are judiciously adapted to the circumstances of the various stations; thus, when removal by water is practicable flush-out closets are provided, and elsewhere the dry-earth system is in use. There are no cesspits and consequently no abiding cause of nuisance. With regard to sanitary improvements it is said that the year was a period of comparative quiescence in this respect, but certain improvements of minor importance were carried out, such as at Fort Regent, provision of concrete pavement in front of soldiers' rooms, alteration of surface channels near officers' stables, and provision of earth closet for children's school. Among suggested improvements is the provision of a properly constructed apparatus for the disinfection of clothing, &c. at the station hospital, St. Helier's; the present arrangements for this purpose being of the most meagre and make-shift character. Some difficulty was experienced with reference to warming, especially in regard to hospitals, under the recent regulations as to the allowance of fuel. At Alderney some married quarters were put in a state of repair, and appear to be comfortable and to give satisfaction. Fort Essex was converted into a hospital and is situated on high ground at a distance from other buildings. It affords four wards for ordinary cases, and in addition wards for the treatment of infectious disease. The lighting, warming, and general sanitary conditions are good.

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North British District. *United Kingdom.*

It is reported by the officiating Principal Medical Officer that the general health of the troops in the district was good, and the sanitary condition of barracks and quarters satisfactory. At Ayr the barracks generally are in good order, but another bath-room appears to be required. A great improvement is mentioned in the provision of a dining hall, the men no longer eating in their sleeping apartments. At Berwick-on-Tweed the barracks are very old, but the situation is a healthy one. The buildings receive every attention in regard to sanitation, and are generally satisfactory, but the advisability of having hot water laid on to the baths is put forward. At Edinburgh the barracks consist of buildings, which have been erected at various times, according to the style then in vogue, and do not comply with modern requirements in many respects. In some of them the ventilation and lighting is defective, and the distance of some of the rooms from such conveniences as cookhouses and latrines is very considerable. The married quarters are good, but the accommodation in some instances is too limited. At Leith Fort the barracks are old and dingy buildings, constructed of stones and mortar; although the walls are thick the rooms are cold and draughty from old and badly fitting doors and windows. In winter there is some difficulty in warming the rooms sufficiently, and the lighting is said to be poor. At the end of the year an outbreak of diphtheria took place among the children of the married soldiers; the surface drains of the quarters were found to be defective, and steps were at once taken to remedy their condition. At Piershill the drainage of the barrack square, stables, and hospital, was entirely renewed during the year, and the sanitary condition of the station in this respect is reported to be satisfactory. At Fort George the barrack blocks appear to be satisfactory, but the casemates are cold, damp, badly lighted, and badly ventilated, but as they are only occupied for a short time in the year when the militia are in training, and the men are most of the day in the open air, no ill-effects have been traced to their occupation. At Glencorse the barracks are somewhat exposed as to position, but were in good order except the ablution rooms, which were the subject of considerable correspondence. The practice of sending town refuse to Glencorse has been discontinued, and there were no complaints on this head during the year. At Maryhill barracks, Glasgow, the sanitary arrangements were satisfactory, but here also there was a complaint that no hot water is laid on to the baths, a great inconvenience, especially in winter. At Hamilton the prisoners' room was enlarged during the year, and a very good ablution room formed out of the old armourer's shop. At Inverness the drainage of the barracks requires reconstruction, and it is said that a scheme has been approved. At Perth the barracks and hospital were generally in good order, but the latrines of the latter required renewal. At Stirling Castle the sanitary state of quarters was satisfactory.

Belfast District.

The Principal Medical Officer, Brigade-Surgeon Lieut.-Colonel A. F. Preston, M.B., states in his annual report that the general health of the troops was good during the year, and the barracks, quarters, and hospitals in a satisfactory sanitary condition. At Armagh the barracks were in good order, and no change is reported. At Belfast the accommodation was sufficient according to the old scale, for which special sanction is given; the married quarters are satisfactory, but the accommodation is not sufficient as many families live out of barracks. At Willow Bank the huts and barracks were in good order. At the Tram barracks occupied by a troop of cavalry there is no water laid on to the men's lavatory, and the supply to the kitchen is scant and hardly sufficient, owing to the slight pressure. At Holywood during the greater part of the year detachments of infantry were under canvas, but the building of new barracks has commenced. The extension of the station hospital was completed

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during the year, and the hospital, which formerly accommodated 48 patients, now will hold 72, without some small wards at the back. It is said, however, that the accommodation is still insufficient, and it was necessary to utilise a barrack room for this purpose. At Belturbet the sanitary condition of barracks was generally good, but the dry-earth latrines were found to be defective; this, however, was remedied on representation. At Dundalk the barracks were occupied on the old accommodation, and on this arrangement there was no over-crowding. The barracks are in a somewhat exposed position, but the health of the troops was good. The hospital was satisfactory and gave sufficient accommodation, but it is said that it is difficult to warm properly with the ordinary allowance of fuel, as the building consists of many small wards. At Enniskillen the barracks were satisfactory, but the hired quarters for married families were indifferent. The water supply to the station hospital, which is situated at a considerable height above the barracks, is at times scarcely sufficient for all purposes. At Newry also the married quarters, lodgings, are said to be badly ventilated, over-crowded, and dirty; this condition was brought to the notice of the authorities. With regard to the station hospital it is remarked that, if the place is to be retained as a station for a regiment, more accommodation is required for the isolation and treatment of infectious cases, only one small ward with one bed being at present available. It is suggested that a suitable hut should be erected in the enclosure in rear of the hospital. At Londonderry the state of barracks and hospital is satisfactory, and the new married quarters are sufficiently commodious. At Omagh the walls of the barracks and station hospital were damp in places, especially at the ends most exposed to the weather; this was remedied to a considerable extent in the case of the hospital by coating the walls outside with a composition impermeable to wet.

Dublin District.

The Principal Medical Officer, Surgeon Major-General J. Sinclair, shows in his report for the year that the general health of the troops compares favourably with that in the previous year. Most of the barracks in the district are old buildings, which could scarcely be made perfect, and although the repeated recommendations of medical officers are gradually being attended to and carried out, there still remain many serious sanitary defects. At Dublin the drainage of certain barracks is said to be unsatisfactory, notably that at Portobello barracks; at Wellington barracks there is also said to be an insanitary state of drainage. Attention was frequently called to these matters and suggested improvements are said to be under consideration. At Wellington barracks many improvements were made, but certain demolitions recommended with a view of admitting more sunlight and air had not been carried out at the close of the year. At Island Bridge barracks the surface drainage was still in an unsatisfactory state; some repairs were executed close to the block of married quarters, and recommendations for the completion of the work were made, and were remaining under consideration. There was some overcrowding at these barracks owing to the great number of recruits, but this was obviated by placing men under canvas in the barrack square. At Ship Street barracks recommendations were made that the underground rooms in the basements should be filled up, and the matter was referred for consideration. They contain the bedding store, the bath and ablution rooms, and are ill adapted to the purpose, being damp, dismal, and unwholesome, situated under the level of the street and of the wretched tenements outside the barracks. Concrete floors have been laid in many of the barrack rooms, and if all the basement rooms in the old barracks were to have this sanitary floor substituted for the old one, it is thought a higher standard of health might reasonably be looked for. The Royal barracks being still under repair were not occupied during the year. At Athlone the barracks are old, but they as well as the hospital appear to have been kept in good sanitary condition throughout the year. At the infantry barracks a scullery was added to each of the staff sergeants'

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quarters near the prison yard. The foul drains were properly trapped at the entrance to each barrack. Sanitary floor laid to a few of the men's rooms. At Birr the sanitary conditions were satisfactory, except that the water supply in prolonged dry weather has to be brought in carts from a stream about a quarter of a mile distant from barracks; the supply from this source is, however, good and unlimited. At Galway the water supply is from the river, from which it is pumped into a reservoir; the filter beds are defective, and it is necessary to use filters in barracks. At Mullingar the barracks were generally satisfactory, but the married quarters were insufficient in number, and the building of additional quarters has been sanctioned. The rations for the troops were on the whole of good quality, and the cooking was sufficiently varied. The clothing was suitable and the knitted jersey proved a great boon. *United Kingdom.*

Cork District.

Surgeon-Colonel W. Collis, the Principal Medical Officer, reports that the stations in the district are in a good sanitary condition generally. At Ballincollig the drains were put in good order during the year. Filters were in constant use pending the introduction of a water supply from the neighbouring hills, a source completely free from suspicion. At Fort Elizabeth, Cork, steps were taken with a view to improve the ventilation of the guard-room and prisoners' room. At Fermoy many improvements in minor details took place during the year. A ventilating pipe of a drain was found to be blocked, and in consequence the foul sewer gas having no other means of escape, forced its way through an adjacent trap and was probably a cause of disease; this was of course remedied. In the hospital it is proposed to add another cistern in order to improve the flushing arrangements. At Kilkenny a large cess pit was found outside the wall of the hospital, and close to it into which the latrines emptied; this was a source of danger and was removed. At Kinsale the cells were found to be unfit for occupation owing to damp and the absence of sufficient warming arrangements; their disuse was advised, and the recommendation was carried out. At Fort Charles the casemate rooms require re-flooring and the ground to be thoroughly cleaned, and the canteen requires enlargement. At Limerick the condition of the filtering tanks was called in question, and on examination it was found that in several places they were useless through want of material and insanitary through want of cleaning; this defect was remedied, and the tanks are now in good condition. The water supply for flushing latrines constantly fell short, a new supply was taken from the vicinity of Castle Connell, and was shortly to be in operation. At Fort Camden the water supply, originally collected in the ditch of the Fort, pumped up, and filtered, is a very unsatisfactory arrangement, and it ran short in the summer; it is still the supply, but added to by water brought in carts from Crosshaven in dry weather. Spike Island, Haulbowline, and Rocky are dependent for their water supply on tanks filled by boat from Queenstown, and on the fall of rain. The use of condensers on these islands is worth consideration, the first cost would probably be soon recovered, and these outposts would then be permanently provided for in view of the necessities of war emergency. The supply in the tanks becomes too scanty at times in the summer. The dry earth for the latrines was found to be disintegrated rubble and useless; representation was therefore made with good results. At Fort Carlisle a cess pit exists in the outer Fort near the cook-house; it was recommended that this be done away with and the drain connected with the main drain, a trap being introduced at the junction. At Templemore it was found that the cells were not warmed, and recommendation was made in this direction; the drainage requires repair, and this is under consideration. At Tralee a separate infection ward is required.

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Curragh District.

The Senior Medical Officer, Surgeon Lieut.-Colonel H. Comerford, reports that the general sanitary condition of the district was good during the year, and the results were satisfactory, as seen from the small amount of sickness which prevailed. The principal conditions which affected the health of the troops were the cold and inclement season and climate, together with the defective condition of the huts, which are getting dilapidated, but with regard to the latter it is said that the camp will soon be reconstructed. During the year the administrative block of the station hospital was built and was about to be handed over for occupation; it is intended shortly, it is said, to build married quarters, lying-in hospital for soldiers' wives, and children, infectious hospital, and accessories. The ablution accommodation for the cavalry and artillery at Newbridge, which was not altogether satisfactory, is now reported to be satisfactory. It is expected that the barracks reconstruction would shortly be commenced, and that the substitution of barracks for huts would be completed in a year or two. The cleanliness of the surface of the ground was attended to, and the surface drainage kept in good order. The water supply for the Curragh is abundant, and, although hard, it is good; it is obtained from wells north of the camp. At Newbridge the barracks were satisfactory, but there was at one time slight overcrowding, which was speedily remedied. The drainage is satisfactory. The surface drains throughout the barracks were laid down in cement, this being a great improvement. The roads about the barracks are said to require repair. The diet, clothing, and the general supplies for the men were good throughout the year; and the effects of the training in the gymnasium on the health of the men were satisfactory.

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III.—ON THE HEALTH OF THE TROOPS SERVING IN THE MEDITERRANEAN.

Sickness and Mortality.

I.—GIBRALTAR.

Gibraltar.

The average strength of the warrant officers, non-commissioned officers, and men who served in Gibraltar during the year was 4,682. The garrison consisted of Nos. 3, 6, 12, and 19 Companies, Eastern Division, Royal Artillery; Nos. 6, 15, 20, and 32 Companies, Royal Engineers, the 1st Battalion Royal Highlanders, the 2nd Battalion South Lancashire Regiment, the 1st Battalion South Staffordshire Regiment, relieved in November by the 1st Battalion Somersetshire Light Infantry, the 3rd Battalion King's Royal Rifle Corps, relieved in December by the 2nd Battalion of the same regiment, detachments of the Army Service Corps, Medical Staff Corps, Ordnance Store Corps, and Garrison Staff.

The following table gives the principal statistics of the troops in the garrison during the year:—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average constantly Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Average Constantly Sick.
4,682	2,866	18	4	22	67	28	186·02	612·1	4·70	14·31	5·98	39·73

Compared with a similar table for the preceding year a decrease of as much as 144·2 per 1,000 is observed in the admission rate, and a fractional decrease in the ratio of constantly sick but the death rate has increased by 1·48; while in comparison with corresponding average ratios for the previous ten years a decline is observed in all these rates, being 188·3 in that of admission, 1·31 in that of mortality, and 8·37 in that of constant inefficiency through sickness.

The average sick time to each soldier was 14·50 days, which is shorter than the corresponding period in the previous year by a fraction of a day, and than the average period for the preceding ten years by 2·66 days. The average duration of each case of sickness was 23·69 days, which is longer than that in the previous year by 4·29 days, and than the decennial average period by a day and three quarters.

In Abstract XL. are given the principal statistics of individual corps which served in the Command during the year. From this it will be seen that in the Artillery the highest admission and constantly sick rates were 791·4 and 52·15 per 1,000 in No. 12 Company, Eastern Division, while in the infantry the highest annual rates were 1193·4 and 48·67 respectively in the 1st Battalion Somersetshire Light Infantry, but this regiment had only been a few weeks in the Command. The annual admission rate in the 2nd Battalion King's Royal Rifle Corps, also a very short time in garrison, was the

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Gibraltar.

next highest, 969·2 per 1,000. The 3rd Battalion King's Royal Rifle Corps gave the lowest admission and constantly sick rates, 471·8 and 33·79 per 1,000, among infantry regiments. With regard to mortality there were three deaths in the artillery, equal to 3·14 per 1,000, 16 in the infantry (six, or 8·14 per 1,000, being in the 1st Battalion South Staffordshire Regiment), two in the Engineers, and one death in the Army Service Corps.

It is calculated from the returns showing sickness and mortality according to age that the admission ratio of men under 20 years of age was 559·4 per 1,000, that of men between 20 and 25 years 677·5, that of men between 25 and 30 years of age 607·8, and that of men over 30 years of age 374·5 per 1,000. All these ratios are a good deal below the corresponding rates in the previous year, but as in that year the highest admission ratio was among men between 20 and 25 years of age, after which age the rate declines. There was no mortality among men under 20 years of age, but the ratio among men between 20 and 25 years of age was 4·91 per 1,000, that among men in the next quinquennium 2·64, and that among men over that age 6·07; these ratios are in excess of those in the previous year, but the highest rate was among men over 30 years of age, and the next among men between 20 and 25 years of age, which was also the case in the year 1890.

From the table in the annual return giving the admissions, deaths, and invaliding, &c. according to length of service in the Command, it is found that the admission rate of men in their first year was 929·6 per 1,000, among men in their second year of service in the Command the rate fell to 541·8, and among men in their third year to 528·2, after which time the rate rose slightly. The ratios for the preceding year were all higher than those in the year under report, but the highest was among men in their first year of service, and the rates declined with each additional year of service. There was no mortality among men in their first or second year of service in the Command, but among men in their third year there were 3 deaths, or 2·64 per 1,000, as compared with 3·42 in the previous year, and among men over three years' service in the Command there were 15 deaths, or 8·92 per 1,000, as compared with 1·35 in 1890.

In Abstract No. II. will be found the more important statistics of sickness, mortality, and invaliding arranged according to the different groups and orders of diseases.

General Diseases.—*Diseases dependent on Morbid Poisons.—Eruptive fevers* were represented by a single mild case of measles.

Enteric Fever caused 11 admissions and 3 deaths, being in the ratios of 2·3 and ·64 per 1,000 respectively, which are lower than the corresponding rates in the previous year by 3·3 and ·22, and than the average ratios for the previous five years by 12·2 and 1·66 respectively. The per-centage of mortality to attack was 27·3 as compared with 15·4 in the previous year, and with 15·8 the average of the preceding five years. The majority of the cases ran a severe course.

Simple Continued Fever.—103 admissions are recorded, equal to a ratio of 22·0 per 1,000, which is lower than the corresponding rate in the previous year by 8·5, and below the quinquennial average rate by 7·8. The average number constantly sick from these fevers was equal to a ratio of 2·67 per 1,000, which is the same as the last year's rate, but is below the average rate of five years by 1·07. Several of the cases were protracted and were complicated with rheumatic symptoms. Under the head of *dysentery* only one admission is shown; in the previous year there were three.

Influenza, which in the previous year, at its commencement, had caused as many as 733 admissions, gave 22 admissions in the year under report, but with the exception of one which was complicated with bronchitis all the cases were mild and readily amenable to treatment.

The remaining admissions in the first sub-group of diseases were 3 for mumps and one for diphtheria; the last named was a severe and protracted case, which, however, ultimately recovered.

Malarial Fevers.—There was no admission under this head.

Septic Diseases were represented by two cases of erysipelas, both of a mild type.

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Venereal Diseases.—The number of admissions for *primary syphilis* was 94, being in the ratio of 20·1 per 1,000, which is below the corresponding rate in the previous year by 33·3, and below the average rate of the preceding five years by 16·4. Including simple venereal ulcer, which caused 238 admissions, or 50·8 per 1,000, the admission ratio for primary venereal sores was 70·9 per 1,000, a decrease of 40·0 from the last year's rate, and one of 53·5 from the average rate. *Secondary syphilis* was the cause of 112 admissions, equal to 23·9 per 1,000, which is in excess of the rate for 1890 by 5·4, but below the quinquennial average rate by 7·0. The admissions for gonorrhœa were 406 in number, equal to a ratio of 86·7 per 1,000, which is identical with the corresponding rate in the previous year, but below the average rate of five years by 19·8. The total admission rate for all forms of venereal diseases was 181·5 per 1,000, which shows a decline of 34·6 from the last year's rate, and is below the quinquennial average rate by as much as 80·3. The total amount of constant inefficiency caused by these diseases was equal to 14·36 per 1,000, which is fractionally less than in the previous year, and below the average rate by 3·49. *Gibraltar.*

Parasitic Diseases.—There were 7 admissions for tænia solium as compared with 6 in the previous year.

One case of *scurvy*, in a mild form, came under treatment, and 35 cases were returned under the head of *alcoholism*, being in the rate of 7·5 per 1,000, more than double the rate of the previous year; no explanation of the cause of this increase is afforded. Of the cases treated 2 were delirium tremens.

Debility.—Under this head 26 cases are shown, the ratio being 5·6 per 1,000, which is lower by 2·8 than in the preceding year. Most of the cases were the result of previous attacks of fever.

Rheumatism.—The admissions numbered 110, among which were two cases of rheumatic fever, both somewhat severe. The admission rate was 23·5 per 1,000, which is lower by 9·8 than the previous year's rate, and below the five years' average rate by 10·5.

Tubercular Diseases gave six admissions, all for lung affection. The admission ratio, 1·3 per 1,000, was above the last year's rate by ·7, but below the average rate by ·9. There were 3 deaths of invalids due to tubercular disease of the lungs. Other diseases of this group comprised 23 cases of non-malignant new growth, 4 of purpura, one of which was rather severe, 3 of diabetes, and one of anæmia.

Local Diseases.—*Diseases of the Nervous System.*—50 admissions are returned, including 5 for mental disease. The admission rate, 10·7 per 1,000, is in excess of that in the previous year by 3·6, and of that of the average of the preceding five years by 6·9. In addition to the cases of mental affection, the admissions included 19 cases of neuralgia, 12 of epilepsy, 8 of vertigo, 4 of paralysis, one fatal, and 2 of inflammation of the brain and its membranes, both fatal.

Diseases of the Eye caused 52 admissions, giving a ratio of 11·1 per 1,000, which differs only fractionally from the rate in the previous year and the average rate. Among the cases were 27 of conjunctivitis and 6 of iritis.

Diseases of other Organs of Special Senses.—37 admissions are returned, all but one for aural affections. The admission rate was 7·9 per 1,000, an increase of 3·8 on the last year's rate, and above the average rate by 2·4.

Diseases of the Circulatory System gave an admission ratio of 4·5 per 1,000, which is in excess of the rate in 1890 by 1·9, and above the average rate by 3·1. The cases were 11 of palpitation of the heart, 4 of valvular disease, one fatal, 2 of hypertrophy of the heart, 2 of varicose veins, and one of pericarditis and dilatation of the heart respectively, both of which terminated fatally.

Diseases of the Respiratory System.—There were 127 admissions, equal to a ratio of 27·1 per 1,000, an increase of 4·6 on the previous year's rate, and just above the average rate. The principal causes of admission were bronchitic affections, and among the remainder were 8 of pneumonia, 7 of pleurisy, and 6 of asthma. There was one death from pleurisy and one, an invalid, from pneumonia.

Diseases of the Digestive System caused 377 admissions and 3 deaths The admission rate, 80·5 per 1,000, was in excess of the corresponding rate in the

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Gibraltar.

previous year by 7·1, and above the quinquennial average rate by 2·9. The principal causes of admission were affections of the mouth and throat, 154 cases, dyspepsia 80, colic 56, diarrhœa 36, and hepatic disease 25 cases, including 10 of hepatitis, 13 of jaundice, and two of hepatic abscess. The deaths were returned as due to abscess of the sub-peritoneal tissue, glossitis, and abscess of the liver one case respectively.

Diseases of the Lymphatic and Glandular System.—50 admissions are returned, being at the rate of 10·7 per 1,000, an increase of 1·0 on the last year's rate, and of 1·7 on the average rate.

Diseases of the Urinary System caused only 3 admissions, all for incontinence of urine; in the previous year there was only one admission, and for the same cause.

Diseases of the Generative System, with an admission ratio of 63·7 per 1,000, were slightly less frequent than in the previous year, the decrease in ratio being 3·9, and a good deal less frequent than the average of five years, the decrease being 33·3. Of 298 admissions 238 were for simple venereal ulcer, and among the remainder were 41 cases of orchitis and 5 of stricture of the urethra.

Diseases of the Organs of Locomotion.—37 admissions are returned, the great majority for synovitis. The admission rate, 7·9 per 1,000, is the same as that in the previous year, and above the average.

Diseases of the Connective Tissue caused 92 admissions, or 19·7 per 1,000, rather below the rate in the previous year, but above the average.

Diseases of the Skin were the cause of 244 admissions, equal to a ratio of 52·1 per 1,000, which is higher than the corresponding rate in the previous year by 12·4, and than the average rate by 16·5. Ulcers, boils, and scabies were the chief causes of admission, and there were among the remainder some troublesome cases of eczema.

Injuries caused 498 admissions and 5 deaths. The admission rate, 106·3 per 1,000, is in excess of that in the previous year by 25·2, and of the average rate by 6·1. There were 3 admissions for general injury, two for multiple injury, one of which, the result of an accidental fall over the line wall, proved fatal; the third admission was for asphyxia by submersion, a man having been rescued from drowning while bathing. There was one death from asphyxia by hanging, suicidal, while in a state of temporary insanity; and one from asphyxia from plugging of the air passages with foreign bodies, while in a state of intoxication, a verdict of accidental death was returned. The admissions for local injuries were chiefly contusions, wounds, and sprains, and there were 21 cases of fracture and 3 of dislocation. There were two deaths from gunshot wound, one suicidal, while in a state of temporary insanity, and one homicidal, a man having been shot dead while endeavouring to force a sentry.

Invaliding.—The number of men invalided home during the year was 67, being in the ratio of 14·3 per 1,000, which is higher than the corresponding ratio in the previous year by 2·29, but lower than the average rate for the preceding ten years. With regard to invaliding in different corps, it is observed among those whose average annual strength was over 100 men that the highest ratio was 30·67 per 1,000 in No. 12 Company, Eastern Division, Royal Artillery the next being 16·28 in the 1st Battalion, South Staffordshire Regiment; the lowest ratio was 7·84 in the 3rd Battalion, King's Royal Rifle Corps, which left for England towards the close of the year. Taking the ages of the men invalided it is observed that the ratio of men invalided under 20 years of age was 6·99 per 1,000, that among men between 20 and 25 years 10·26, that among men between 25 and 30 years 17·14, and that among men over 30 years of age 30·36. There is not much similarity between these ratios and those in the previous year. As to service in the Command, it is found that there was no invaliding among men in their first year, among men in their second year the invaliding rate was 5·23 per 1,000, among men in their third year 4·40, and among men over three years' service in the Command 33·91. In the preceding year the highest invaliding ratios were among men in the first two years of service in the Command. The principal causes of invaliding were continued fevers 2·78 per 1,000, diseases of the nervous system 2·35, ophthalmic

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affections 1·50, tubercular diseases 1·28, diseases of the respiratory system 1·07, and secondary syphilis, debility, and digestive disorders ·85 respectively. *Gibraltar.*

The number of men finally discharged as medically unfit for further service was 28, equal to a ratio of 5·98 per 1,000, which is below the corresponding rate in 1890 by 3·89, and below the decennial average rate by 2·98. The principal disabilities necessitating discharge by invaliding were diseases of the nervous system 1·28 per 1,000, including ·43 for mental affections, diseases of the eye 1·07, debility ·64, diseases of the respiratory system ·43, and injuries ·42 per 1,000.

Officers.—The average strength of officers was 184, and there were 79 attacks of illness and 3 deaths. The ratio of prevalence of sickness was, therefore, 429·3, and that of mortality 16·30 per 1,000, the former being lower by 153·0, and the latter higher by 9·97 than the corresponding rate in the preceding year. Injuries and disorders of the digestive system were the principal causes of sickness. One death was due to phlebitis, one to gastric ulcer, and one to poisoning by hydrocyanic acid, a case of suicide while in a state of temporary insanity.

Women.—The average strength was 295, and there were 153 admissions and 4 deaths, being in the ratios of 518·6 and 13·56 per 1,000 respectively. The admission rate was lower by 306·3, and the death rate higher by 5·78 than the corresponding rate in the previous year. The principal causes of admission were digestive disorders 31 cases, affections of the generative system 27, and debility 22 cases. The deaths were one from valvular disease of the heart, one from puerperal convulsions, one from puerperal septicæmia, and one from peritonitis.

Children.—The average strength was 503; there were 389 admissions and 18 deaths. The admission rate, 773·3 per 1,000, was an increase of 38·7 on the rate in the preceding year, and the death rate shows a fractional increase in a similar comparison. Measles caused as many as 133 admissions, the disease occurred in the first half of the year, principally in January and February. Among the other cases treated were 59 of bronchitis and 40 of diarrhœa. The deaths were 5 from diarrhœa, 4 from debility, 2 from measles, and 1 from convulsions, croup, bronchitis, pneumonia, teething, gastritis, and enteritis respectively.

Sanitary Conditions.—The Principal Medical Officer, Surgeon Major-General R. W. Meadows, reports that the scheme for a constant and central water supply within the fortress, coupled with an alternative or independent new drainage system, is in abeyance. Increased advantage has lately been taken to store the annual heavy rainfall, and it is anticipated that there will be no deficiency of drinking water. One cause of the previous deficiency was contamination of the water in many of the old tanks.

Over-crowding exists among the civil population, which is on the increase, and is far in excess of the requirements of the garrison or local trade. The houses are huddled together and many are dark and damp. The subject of new buildings is carefully considered by the sanitary commissioner, and such are only to be erected under a certain and sufficient sanitary standard.

With regard to barrack accommodation it is stated that increase in this direction is in progress at the Moorish Castle, and plans for new buildings in other parts of the Rock are in course of preparation.

The Casemate Barracks, whose sanitary reputation has not been good, have been made by recent improvements comparatively healthy dwellings, except a certain portion of King's Bastion, occupied by families, which is not so good; there is, however, no other accommodation available, and if driven into lodgings the condition of the families would be worse.

Great attention has been paid to the condition of the foreshore, by the removal of decayed vegetable and other matter which accumulates during certain winds. The sanitation of certain workshops at the North Front, which were by no means perfect, has been carefully attended to.

With regard to drainage it is pointed out that former drainage works were in many cases imperfectly done, the pipes badly laid, and the house connexions faulty. Various defects of this nature were discovered and remedial measures as far as practicable. The Principal Medical Officer is of opinion that the subsoil of the station is to a great extent contaminated, which is a source of danger, particularly during the hot and dry weather; the

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Gibraltar. remedy for this is an efficient drainage system, well ventilated and thoroughly flushed.

The hospital accommodation has not been satisfactory. Owing to the resumption of half of the naval hospital by the naval authorities the accommodation in the remaining half was quite insufficient for military requirements, and it was necessary to open other hospitals in buildings quite unsuited for the purpose, and to treat a number of sick in marquees. The want of a new military hospital is much felt, and it would appear that its provision is the more necessary as it is probable, from the proposed increase of the Mediterranean and Channel fleets, the naval authorities may require the whole of the present hospital.

There were many sanitary improvements carried out during the year, such as the overhauling and relaying, where necessary, of the drains of several barracks and quarters, improvements in ventilation, provision of new floors to certain quarters, and improvements in the South barracks by removal of walls at the end and the substitution of iron railings.

II.—MALTA.

Malta. The average strength of the troops serving in Malta during the year was (with the exception of the Royal Malta Artillery) 7,697, and the force was composed as follows:—The 6th, 12th, and 27th companies, Southern Division, Royal Artillery, throughout the year, the 14th and 15th companies from the 1st of January to the middle of October, when they left for England, the 29th company from 1st September, and the 2nd company from the 12th October until the close of the year. There were two companies Royal Engineers, the 2nd Battalion Royal Scots, 1st Battalion Welsh Regiment, the 1st Battalion Royal Berkshire Regiment, the 1st Battalion Royal West Kent Regiment, the 2nd Battalion Connaught Rangers, detachments 2nd Battalion Essex Regiment, Army Service Corps, Medical Staff Corps, Ordnance Store Corps, and Garrison Staff throughout the year. In addition to the above there were the 1st Battalion Shropshire Light Infantry until the 17th March, when it embarked for Egypt, and a detachment 1st Battalion Bedfordshire Regiment until the 9th May, also the 2nd Battalion Royal Irish Rifles from the 29th March, on arrival from Egypt, until the end of the year.

The following table shows the most important of the statistics of sickness and mortality in the Command during the year:—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Average Constantly Sick.
7,697	5,054	47	3	50	178	118	344·76	656·6	6·49	23·13	15·33	44·79

Comparing the above with a similar table for the previous year, it is observed that there is an increase of 68·3 per 1,000 in the admission rate, and one of 6·51 in the constantly sick rate, but the death rate is lower by 3·28; but compared with similar average rates for the preceding ten years, there is a decline of 42·1 in admission rate, one of 2·21 in the mortality rate, and to a fractional extent in the rate of constant inefficiency through sickness.

The average sick time to each soldier was 16·35 days, which is longer than the corresponding period in the previous year by 2·38 days, and shorter than the average period for the preceding ten years by a quarter of a day.

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The average duration of each case of sickness was 24·90 days, which is longer than in the preceding year by 1·15 days, and than the decennial average period by 1·14 days. *Malta.*

In Abstract XL. are shown the more important statistics of sickness and mortality in the different arms of the service, and in particular corps. In the artillery the admission ratio was 563·7, the death rate 5·93, and the constantly sick rate 42·31 per 1,000; all these compare favourably with corresponding rates in the previous year, the decrease being 118·8, 7·74, and 5·60 respectively. Among the different companies the highest admission ratio was 920·0 per 1,000 in No. 2 Southern Division, stationed at Ricasoli for three months after arrival from England; the next rate was 728·1 in No. 15 Company, also at Ricasoli, until departure for England in October; the highest ratios of constant inefficiency were also in the above-mentioned companies, 68·40 and 49·56 respectively. The lowest admission ratio was 421·9 in No. 14 Company at St. James's Cavalier, also the lowest ratio of constantly sick, 38·75 per 1,000. The highest death rate was in No. 12 Company at Fort Tigne and Ricasoli, 15·24 per 1,000, and in three companies there was no mortality. In the Engineers the admission rate was 660·6, the death rate 6·06, and the constantly sick rate 38·30 per 1,000, all of which are higher than corresponding rates in the previous year. In the infantry the admission rate, 682·6 per 1,000, shows an increase of 111·5 on the previous year's rate, and the constantly sick rate, 45·98, one of 9·70; the mortality rate on the other hand, 6·13 per 1,000, is lower by 2·92. Among battalions of infantry, the highest admission rate was 784·7 per 1,000 in the 2nd Battalion the Connaught Rangers, stationed at Verdala, the next being 765·9 in the 2nd Battalion Royal Irish Rifles at Pembroke and Gozo; the lowest annual ratio was 458·5 in the 1st Battalion Shropshire Light Infantry at Gozo and Pembroke until its departure for Egypt. The ratio of mortality was highest (excluding that of a detachment of the 1st Battalion Bedfordshire Regiment, only a short time in garrison) in the 2nd Battalion Essex Regiment, 15·42 per 1,000 at St. Angelo and Vittoriosa; the next, 9·40, in the 2nd Battalion Connaught Rangers; in the 2nd Battalion Shropshire Light Infantry there was no mortality, and a ratio of only 1·63 in the 2nd Battalion Royal Irish Rifles at Pembroke and Gozo. Constant inefficiency through sickness was highest in the 2nd Battalion Connaught Rangers and the 2nd Battalion Essex Regiment, the rates being 59·54 and 52·13 respectively, and least in the 1st Battalion Shropshire Light Infantry, the annual rate being 30·83 per 1,000.

Examining into the effect of the ages of the men on the sickness and mortality among them, it is found that the admission ratio among men under 20 years of age was 621·1 per 1,000, that among men between 20 and 25 years of age was 771·2, that among men in the next quinquennium was 555·8, and that among men over 30 years of age, 351·5 per 1,000. In the preceding year the sequence of the admission ratios was similar to that in the year under report, but the rates in the last-named were all higher than the corresponding ones in 1890, the ratio among men under 20 years showing an increase of 61·4, that among men between 20 and 25 years one of 12·6, that among men between 25 and 30 years one of 129·5, and that among men over 30 years one of 70·8. The mortality rate among men under 20 years of age was 5·94 per 1,000, that among men between 20 and 25 years of age 6·32, that among men between 25 and 30 years 6·44, and that among men over 30 years 3·41 per 1,000. Compared with corresponding ratios in the previous year, all the rates show a considerable decrease.

With regard to the influence of service in the Command on sickness and mortality among the troops, it has been calculated that the admission ratio among men in their first year of service in the Command was 751·5 per 1,000, rising to 761·6 among men in their second year, falling to 419·4 among men in their third year, again increasing to 718·5 among men in their fourth year of service, and declining to 524·6 among men over four years' service in the Command. In the previous year the sequence of ratios was somewha similar, but there are considerable variations between the corresponding ratios in the two years; thus among men in their first year of service there is an increase of 257·1, among men in their second year a decrease of 385·4, among men in their third year a decrease of 13·3, among men in their fourth year an increase of 245·1, and among men over four years' service one of 238·0. Mortality among men in their first year in the Command was at the rate of

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5·64 per 1,000, among men in their second year 9·58, among men in their third year 2·90, among men in their fourth year 11·31, and among men over that service 2·55 per 1,000. Compared with corresponding ratios in the previous year, there is an increase in that among men in their fourth year of service in the Command, but a decrease in the remainder.

The principal statistics of sickness and mortality according to the several groups and orders of diseases are given in Abstract III.

General Diseases.—*Diseases dependent on Morbid Poisons.*—There were only three admissions for *eruptive fevers*, two for cow-pox, and one for scarlet fever.

Enteric fever caused 48 admissions and 19 deaths, bring in the ratios of 6·2 and 2·46 per 1,000, which are lower than the corresponding ratios in the previous year by 2·3 and ·37, and higher than the similar average ratios for the preceding five years by 1·4 and ·74 per 1,000 respectively. The per-centage of mortality to attack was 39·6, that of the previous year having been 33·3, and that of the average of five years 36·1. Of the men attacked, 3 were under 20 years of age, 11 between 20 and 21 years, 3 between 21 and 22, 6 between 22 and 23, 9 between 23 and 24, and 16 over 24 years of age. With regard to total service, 1 man was in his first year, 7 men were in their second, 10 in their third, 7 in their fourth, 9 in their fifth year, and 14 men had over five years' service. As to service in the Command, 19 men had less than one year, 13 more than one year and less than two years, and 16 had over two years. The number of cases which occurred in the first quarter of the year was seven, and in the second and fourth quarters also there were seven cases each, but in the third quarter there were as many as twenty-seven cases. In the previous year the greatest prevalence of the disease was also in the third quarter of the year but the fourth was only a little behind. Of the different districts Cottonera shows 28 cases, Valletta 11, Pembroke Camp 5, Citta Vecchia 2, and Gozo 2. The cases were scattered over many barracks, the largest number of admissions from any one being 6 from Ricasoli, 6 from Tigne Hutments, next 5 each from Verdala and Pembroke Camp, then 3 from St. Angelo, 3 from Fort Manoel, 2 from Citta Vecchia, St. Paul's Bastion, Vittoriosa, Isola Gate, St. John's Bastion, and Fort Chambray respectively, and one each from eight other barracks. The Principal Medical Officer, Surgeon Major-General C. D. Madden, remarks that many theories have been put forward by the district medical officers pointing to the probable cause of many of these attacks, but few can be regarded as affording a reliable clue to the actual cause of the disease. He thinks it probable that several of the cases were caused by contaminated milk, as it was found in some instances that the milk was conveyed into barracks in dirty vessels, and that there is reason to believe that it was also, in some cases, adulterated with water obtained from the nearest available source, irrespective of its fitness for drinking purposes. The medical officer in charge at Valletta points out that "a force of over 2,000 men quartered in Valletta and Floriana furnished only "one case of enteric fever during the year, the admissions from the disease "taking place, as in the previous year, from Fort Manoel and Tigne Hutments. "The small force in Fort Tigne escaped altogether. From this he concludes "that youth and climate had nothing to do with the causation of the disease, "for the age and service of soldiers in Valletta and Floriana gave them no "advantage over those in Fort Manoel and Tigne huts. The disease depended "on local causes, whatever those causes may have been, and this must stimu-"late us to persevere in our efforts to discover and remove them, depending "largely on sanitary engineering to effect this most desirable object." Brigade Surgeon Lieut.-Colonel T. F. O'Dwyer, M.D. also remarks that it has been supposed that the supply of water from wells, in the houses frequented by soldiers may be connected with the occurrence of enteric fever among them, but from inquiries made, with the assistance of the local authorities, he was unable to conclude that those men quartered in localities where the chief water supply was from wells were more frequently attacked by enteric fever than those residing in more favoured places supplied with aqueduct water; also this would not explain the exemption of the troops in the Valletta and Floriana districts from enteric fever where there are many grog shops, frequented by soldiers, the water supply for which is exclusively from wells.

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Simple Continued Fever.—Under this head 840 admissions are returned and 9 deaths. The admission ratio, therefore, was equal to 109·1 per 1,000, which is higher than the corresponding rate in the previous year by 23·6, and than the average rate for five years by 13; the death rate is lower than in 1890 by ·11, but above the average by ·14. The amount of constant inefficiency on account of these diseases was equal to a ratio of 7·75 per 1,000 as compared with 6·85 in the previous year and with 8·28 the quinquennial average rate. The Principal Medical Officer attributes the increase of sickness from these fevers to the prolonged and trying summer and to the presence in the ranks of several of the regiments of a large number of weakly and immature youths who were unable to withstand the trying effect of the climate. Medical officers concur in thinking the nomenclature misleading as regards these diseases, being of opinion that the term embraces more than one variety of fever, from the simple febricula to the prolonged and severe form called by some Malta fever. The medical officer at Cottonera states of the latter that it is not a continued fever because it intermits, and not a true intermittent, as it is not malarial, and for the same reason it is not remittent, besides which its other characteristics are decidedly different. The medical officer at Valletta points out that this disease differs from enteric fever in that its duration is indefinite, which is not the case with the latter, that the characteristic spots often found on the skin in enteric fever are not found in Malta fever, that the intestinal gland lesions found in enteric fever are not found in Malta fever, and that the mortality from the latter is comparatively small, which is not the case with enteric fever. *Malta.*

Dysentery was the cause of 30 admissions, or 3·9 per 1,000, a decline of ·8 from the previous year's rate, and of 1·5 from the average rate of five years; no death occurred. Of the admissions 19 happened at Cottonera, 6 at Valletta, 3 at Forrest, and 2 at Gozo.

The remaining admissions in the 1st sub-group of general diseases were six in number, all being cases of mumps, which occurred in Valletta.

Malarial Fever.—19 admissions and one death are returned. The admission rate, 2·5 per 1,000, is higher than in the previous year by 1·9, and than the average rate of five years by ·5. The cases were 17 of ague, at Cottonera, and one at Gozo, also a case of remittent fever at Forrest. The Principal Medical Officer states that the majority of these cases were traced to recent residence in Cyprus or Aden.

Septic diseases.—Seven admissions are returned for erysipelas, as compared with 13 admissions for the same disease in the preceding year.

Venereal Diseases.—248 admissions are shown for *primary syphilis*, and the number constantly sick was 28·69. The ratio of admission, therefore, was 32·2, and that of constantly sick 3·73 per 1,000, which are higher than the corresponding ratios in the preceding year by 25·0 and 2·81, and than the average rates of the previous five years by 19·2 and 2·45 respectively. Including simple venereal ulcer, admissions 422 and constantly sick 35·78, the ratio of admission for primary venereal sores was 87·0, and that of constantly sick 8·37 per 1,000, which, compared with similar ratios in the previous year, are higher by as much as 52·7 and 5·37, and higher than the quinquennial average ratios by 55·3 and 5·72 respectively. *Secondary syphilis* caused 168 admissions, being in the ratio of 21·8, in excess of the previous year's rate by 11·6 and of the five years' average rate by 10·1. The ratio of constant inefficiency on this account was 2·19 per 1,000, an increase of 1·03 on the corresponding rate in 1890, and one of 1·11 on the average rate. The admissions for *gonorrhœa* were 532 in number, and there were 39·07 men constantly sick, being in the ratios of 69·1 and 5·08 per 1,000, the former being higher by 9·7 than the rate in the previous year and by 17·4 than the average rate of five years, the latter also is higher in both these comparisons by ·46 and 1·48 respectively. Taking all forms of venereal disease together the admission ratio amounted to 177·9 per 1,000, an increase of 74·0 on the corresponding rate in the previous year, and one of 82·8 on the average rate of five years. The total amount of constant inefficiency from these diseases was equal to 15·64 per 1,000, which is higher by 6·86 than the similar rate in 1890, and by 8·31 than the quinquennial average rate. Medical officers remark on the grave increase of all these diseases, especially to that of syphilis, and attribute it to various causes. A large immigration of women from Italy and Sicily is said

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to have been to some extent accountable for it, and the unsatisfactory basis on which the local Contagious Diseases Act is worked does not, it is stated, allow of the spread of contagion being so efficiently checked as might be the case. It is further stated that there is no doubt that syphilis has become much aggravated throughout the island.

Parasitic Diseases caused 5 admissions, as compared with 7 in the previous year, all were cases of tænia solium.

Alcoholism was more frequent than in 1890, the ratio, 3·1 per 1,000, showing an increase of ·8. Among 24 cases there was one of delirium tremens.

Debility gave an admission ratio of 7·0 per 1,000, about the same as in the preceding year, but much below the average rate.

Rheumatism.—191 admissions and 2 deaths are recorded. The admission ratio was 24·8 per 1,000, a decline of 7·0 from the last year's rate, and one of 3·2 from the average rate of five years. Many of the cases were probably connected, it is said, with Malta fever, of which the disease is a frequent sequela. Among the cases 3 were rheumatic fever.

Tubercular Diseases.—There were 24 admissions and 6 deaths, including two of invalids, being in the ratios of 3·1 and ·78 per 1,000 respectively, as compared with 3·6 and 1·56 in the previous year, and with 2·5 and ·83 the average rates. All the cases, and also all the deaths, were due to lung affections.

Other diseases of this group caused 27 admissions and 1 death. The admission rate, 3·5 per 1,000, shows a decrease. The cases comprised 24 of non-malignant new growth, 2 of purpura and 1 of anæmia.

Local Diseases.—*Diseases of the Nervous System* caused 97 admissions and 2 deaths, including that of an invalid. The admission ratio, 12·6 per 1,000, is higher than the corresponding rate in the previous year by 2·6, but lower than the average rate of the preceding five years by 5·6. Among the cases treated were 14 of mental disease, 48 of neuralgia, 10 of paralysis, and 6 of epilepsy. The death in the garrison was due to meningitis, and that of the invalid to abscess of the brain.

Diseases of the Eye were the cause of 73 admissions, the majority being cases of conjunctivitis. The admission rate, 9·5 per 1,000, is higher by 1·7 than the last year's rate, but lower by 1·2 than the average rate.

Diseases of other Organs of Special Senses.—95 admissions are returned, of which 87 were for aural diseases, and the remainder for nasal affections. 12·3 per 1,000 was the admission rate, an increase on the average rate as well as on the rate in the previous year.

Diseases of the Circulatory System.—There were 48 admissions, of which 28 were due to palpitation, and of the remainder, 8 to valve disease of the heart, and 2 to aneurysm, one of which was fatal. The admission rate, 6·2 per 1,000, is lower by 2·3 than in 1890, and by 2·5 than the average rate.

Diseases of the Respiratory System caused an admission ratio of 17·7 per 1,000, a decrease of 5·7 from the corresponding rate in the previous year, and of 3·8 from the average rate of five years. Out of 136 admissions 96 were for bronchial affections, and of the remaining cases there were 18 of pneumonia and 10 of pleurisy. Of the deaths 3 were caused by pneumonia, one by pulmonary hæmorrhage, and one by pneumonic phthisis.

Diseases of the Digestive System caused 559 admissions and 2 deaths. The admission rate, 72·6 per 1,000, compares favourably with that in the previous year and the quinquennial average rate, the decline being 11·7 and 14·4 respectively. The principal causes of admission were affections of the mouth and throat 208 cases, dyspepsia 83, diarrhœa 78, and hepatic diseases 76 cases including 4 cases of abscess of the liver, of which 2 proved fatal.

Diseases of the Lymphatic and Glandular System.—The admissions numbered 60, equal to 7·8 per 1,000, which is higher than in the previous year by 2·4, and above the average rate by 2·2. Among the admissions was one for splenitis.

Diseases of the Urinary System caused an admission rate of 2·0 per 1,000, about the average rate, but below the last year's rate by 1·4. Of 15 admissions more than half were due to incontinence of urine. There was one death from Bright's disease.

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Diseases of the Generative System caused 523 admissions, of which over four-fifths were cases of simple venereal ulcer. Among the remainder were 53 cases of orchitis and 13 of stricture of the urethra. The admission ratio, 68·0 per 1,000, is higher by 25·6 than the corresponding rate in the previous year and by 34·3 than the average rate. *Malta.*

Diseases of the Organs of Locomotion.—49 admissions are returned, of which 30 were cases of synovitis. The admission ratio, 6·4, is about the average rate, but lower than in the previous year by 1·1.

Diseases of the Connective Tissue gave an admission rate of 21·0 per 1,000, which differs only fractionally from the previous year's rate, but is below the average.

Diseases of the Skin caused 311 admissions, or 40·4 per 1,000, an increase of 9·2 on the last year's rate, and of 3·0 on the quinquennial average rate. The principal causes of admission were boils, eczema, ulcer, and whitlow.

Injuries caused an admission rate of 89·0 per 1,000, an increase of 12·6 on the previous year's rate, and one of 4·6 on the average rate. There were 5 admissions for general injury, two for multiple injury, and three for asphyxia by submersion due to boating and bathing accidents. One death occurred from accidental drowning while bathing. The admissions for local injury were 680 in number, and were chiefly due to abrasions, contusions, sprains, and wounds. Two cases of gunshot wound of the chest occurred; both men were injured at the rifle range at Pembroke by fragments of bullets glancing off stones or from the targets; there was also one slight gunshot wound of arm, accidental, on the ranges by a bullet from a Morris's tube.

Invaliding.—The number of men invalided home during the year was 178, equal to a ratio of 23·13 per 1,000, which differs from the corresponding rate in the previous year, and from the average rate of the preceding ten years to a fractional extent in each case. Excluding corps only a short time in the Command the highest invaliding rate in the Artillery was in No. 6 Company, Southern Division, at Ricasoli, and the lowest 7·81 in No. 14 Company at St. James' Cavalier. Among infantry regiments the highest invaliding rate was 39·70 per 1,000 in the 2nd Battalion Connaught Rangers at Verdala, and the lowest 8·18 in the 2nd Battalion Royal Irish Rifles at Pembroke and Gozo. With regard to the ages of the men invalided there were 20 men, or 29·72 per 1,000, under 20 years of age, 106 men, or 26·80 per 1,000, between 20 and 25 years, 41 men, or 16·51 per 1,000, between 25 and 30 years, and 12 men, or 20·48 per 1,000, over 30 years of age. Compared with corresponding rates in the previous year an increase is observed in all these ratios except that of invaliding among men between 25 and 30 years of age in which there is a decrease. As to service in the Command, 53 men, or 19·92 per 1,000, were in their first year, 54 men or 30·44 per 1,000 in their second year, 30 men, or 21·77 per 1,000, in their third year, 17 men, or 24·04 per 1,000, in their fourth year, and 25 men, or 21·22 per 1,000, over four years' service. Compared with corresponding rates in the preceding year a decrease is observed in the ratios of invaliding among men in the second year of service and among men over four years' service in the Command, but there is an increase in all the other ratios. The principal causes of invaliding were enteric fever 12 cases, or 1·56 per 1,000, an increase of ·28 in the rate in the previous year. Simple continued fever 36 cases, or 4·67 per 1,000, an increase of 1·27; debility 9 cases, or 1·17 per 1,000, an increase of ·04; rheumatism 11 cases, or 1·43 per 1,000, an increase of ·15; tubercular diseases 12 cases, or 1·56 per 1,000, a decrease of ·56; nervous diseases 17 cases, or 2·21 per 1,000, an increase of ·36; diseases of the circulatory system 17 cases, or 2·21 per 1,000; and diseases of the respiratory system 14 cases, or 1·82 per 1,000.

The number of men finally discharged by invaliding as medically unfit for further service was 118, equal to 15·33 per 1,000, which is higher than the corresponding rate in the previous year by 1·87, and than the decennial average rate by 3·71. The disabilities necessitating final discharge were chiefly as follows: debility 11 cases, or 1·43 per 1,000, an increase of ·15 on the corresponding rate of the previous year, tubercular disease 12 cases, or 1·56 per 1,000, an increase of ·14; diseases of the nervous system 26 cases (including 16 cases of mental disease), or 3·38 per 1,000, an increase of

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2·25; diseases of other organs of special senses 10 cases, or 1·36 per 1,000, a decrease of ·12; and diseases of the circulatory system 18 cases, or 2·34 per 1,000, an increase of ·78 on the similar rate in the previous year.

Officers.—The average strength of officers was 194, and there were 141 cases of sickness, 4 deaths, and 9 officers were invalided home during the year. The ratio of prevalence of sickness was therefore 726·8, that of mortality 20·62, and that of invaliding 46·39 per 1,000. Compared with corresponding ratios in the previous year the ratio of sickness is lower by 97·9, and that of death higher by 10·31, but there is no change in the ratio of invaliding. The principal causes of sickness were fevers, 61 cases, comprising one of enteric fever, one of ague, and the remainder simple continued fever; bronchial affections 17 cases, digestive disorders 20, and injuries 14 cases. The deaths were one from simple continued fever, one from valve disease of the heart, one from aneurysm, and one from fracture of the skull, accidental at polo. The causes of invaliding were simple continued fever 5 cases, and enteric fever, rheumatism, deafness, and hepatitis one case respectively.

Women.—The average strength was 317, and the number of cases of illness 153, being in the ratio of 482·6 per 1,000, which is below the corresponding rate in the previous year by 286·8; there were 3 deaths, or 9·46 per 1,000, a decrease of 14·49 from the rate in the preceding year. The principal causes of sickness were simple continued fevers 44 cases, debility 35, digestive disorders 12, and diseases of the generative system 13 cases. The deaths were due to simple continued fever, tubercular disease of the lungs, and diarrhœa one case respectively.

Children.—The average strength of children was 525, and there were 199 cases of illness and 26 deaths. The ratio of prevalence of sickness was 379·0, and that of mortality 49·52 per 1,000. Compared with the previous year's return there is a decline of 197·4 in the ratio of prevalence of sickness and one of 15·51 in that of mortality. The chief causes of sickness were chicken-pox 10 cases, simple continued fever 36, debility 21, bronchitis 37, and diarrhœa 38 cases. The deaths were 3 from simple continued fever, 11 from diarrhœa, 2 each from debility, convulsions, and enteritis, and one from tubercle, scrofula, immaturity at birth, bronchitis, teething, and inflammation of the connective tissue respectively.

Sanitary Conditions.—The Principal Medical Officer reports that the general health of the troops in the Command was not so satisfactory as during the previous twelve months. The number constantly sick was higher, and there was a greater prevalence of simple continued fever. The increase of sickness generally was attributed by residents in the island to the fact that the summer was longer and more exhausting than usual, the heat having been prolonged until late into the autumn.

Several improvements were made in the sanitary condition of the various barracks; but owing to the number of men to be accommodated, some rooms were still in occupation which were not altogether desirable as dwelling places. There was no serious overcrowding, but there was in some cases a diminution of superficial space, causing the men's beds to be unduly close to one another. The conditions of health in casemated rooms is never entirely satisfactory, owing to the gloom and to the difficulty of carrying out efficient and thorough ventilation; such rooms would be more fitted for stores, but in a fortress other conditions, in addition to those of health, must of necessity be thought of. There are several apparent causes for the impairment of health, such as the insufficiency of accommodation, the danger of contaminated milk being supplied by means either of dirty vessels or adulteration with bad water, and, lastly, wines and spirits of the worst quality being supplied in the numerous wine shops which abound on all sides, so cheaply as to tempt many. A dual water supply is also a source of danger, as soldiers, when thirsty, will not take the trouble to go to a source where good water can be obtained, but drink the first that is available. Remedies for some of these evils will be supplied in time. The building of new barracks on Gebel Imtarfa will obviate the first and most important difficulty, but some time must elapse before this position can be occupied by troops.

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The sanitary condition of the various buildings as regards cleanliness is reported to have been satisfactory. There are no means of warming the barracks in the colder months; this is thought to be a defect, especially as regard casemated rooms. The gas supply for lighting was not found to be satisfactory, and in some places oil lamps were substituted. The means of ablution were sufficient and satisfactory, and the water supply met all requirements. Bathing parades are held throughout the summer months. The reports concerning the rations were favourable, and that the cooking was sufficiently varied. Biscuit is issued once a month instead of bread, and preserved meat once a week.

With regard to the hospitals it is reported that the sanitary arrangements were generally satisfactory and that the accommodation is sufficient, but the position, construction, and surroundings of the Valletta station hospital are somewhat objectionable. The want of a suitable hospital for contagious diseases is felt, also of a dieted hospital for women and children. The position of Cottonera hospital is satisfactory, and there is proper provision for lunatics and prisoners, also accommodation for sick officers.

The means of ventilating the main drain by gratings where it passes beneath the southern glacis of Corradino prison have been objected to, as it was thought that during certain conditions of wind sewer gas might be carried into the prison and be a cause of enteric fever, and a strong recommendation for the erection of shafts over the gratings was put forward.

Among the most important of the sanitary improvements effected during the year were improvements in the ventilation of the Zeitun Gate barrack-rooms; also improvements in the same direction in Isola barrack rooms and married quarters by cutting windows through walls; at Pembroke Camp the extension of pipes for aqueduct water and the provision of two stand pipes; at Lower St. Elmo a tank was cleaned out, and two settling chambers provided; and at the married quarters in Fort Ricasoli two sinks were provided in the upper storey, and two sinks with improved surface drainage in the lower storey.

Royal Malta Artillery.

The average strength of this corps was 365 non-commissioned officers and men, and the accompanying table shows the chief statistics of their sickness and mortality:—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
365	216	1	—	1	—	1	7·38	591·7	2·74	—	2·74	20·21

Compared with the return for the preceding year the admission ratio shows a small decrease, 2·8, and the constantly sick rate one of 5·46 per 1,000, but there was no change in the death rate, and in comparison with similar average rates for the previous ten years a decline has taken place in all these ratios, being 69·1 in the case of admission, 1·52 in that of mortality, and 4·75 in that of constantly sick. The average sick time to each soldier was 7·38 days, and the average duration of each case of sickness 12·47 days, which are shorter than the corresponding periods in the previous year by 1·99 days and 3·29 days, and than the similar decennial average periods by 1·73 days and 1·32 days.

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General Diseases.—*Diseases dependent on Morbid Poisons.*—In the 1st sub-group of general diseases there were 17 admissions, all of which were cases of simple continued fever, with one exception, of a mild type; the admission ratio was 46·6 per 1,000, an increase of 5·5 on the last year's rate, but below the average rate of five years by 17·4. Malarial fevers caused no admissions, but under septic diseases two are returned, both cases of erysipelas of some severity.

There were 15 admissions for venereal disease, equal to a ratio of 41·1 per 1,000, a decrease of 38·4 from the rate in the previous year, and below the quinquennial average rate by 14·7.

The number of admissions for primary syphilis was 4 and for secondary syphilis 3, as compared with 4 and 4 respectively in the previous year. The admissions for gonorrhœa were 8 in number, as compared with 21 in 1890.

Parasitic diseases were represented by a single case of tænia solium, and there were 8 admissions for debility. Rheumatism caused 11 admissions, of which one was a case of rheumatic fever, papilloma gave one admission, as did also tubercular disease of the lungs.

Local Diseases.—Nervous diseases were represented by two admissions for convulsions occurring in the same man. Ophthalmic affections caused 7 admissions, mostly for conjunctivitis, and there were 6 admissions for inflammation of the external meatus. Diseases of the respiratory system gave 30 admissions, or 82·2 per 1,000, an increase of 5·5 on the previous year's rate, and above the average by 12·7. There was one case of pneumonia, one of pleurisy, and the rest were bronchitic cases. Diseases of the digestive system were the cause of 34 admissions or 93·2 per 1,000, which is a higher rate than in 1890 by 22·0, but below the average by 4·5. The principal causes of admission were affections of the mouth and throat, and among the remainder there were two cases of hepatic disease. Diseases of the skin caused 23 admissions, equal to 63·0 per 1,000 below the average ratio, but somewhat in excess of the previous year's rate. Boils and whitlows were the chief causes of admission. In the remaining order of local diseases there were very few admissions.

Injuries caused 50 admissions, being in the rate of 137·0 per 1,000, which differs only fractionally from the average rate, but is higher than the rate in the preceding year by 21·9. Wounds were the most frequent injuries, nearly half the total number of admissions being due to them. There was one death due to injuries received from jumping from a bastion into the ditch below, a case of suicide while in a state of temporary insanity.

Invaliding.—There was only one man discharged the service as medically unfit during the year; the disability necessitating discharge was Bright's disease.

Officers.—The average strength of officers during the year was 17 and there were 16 cases of illness. Simple continued fever and bronchitis were the principal causes of sickness.

Women and Children.—The average strength of women was 40, and among them were 12 cases of illness, simple continued fever being the prevailing disease. There was one death, sudden, after delivery. The average strength of children was 118, and the number of cases of illness was 63. The principal causes of sickness were simple continued fever 19 cases, diarrhœa, 13, teething, 9, and bronchitis, 6 cases. There were 6 deaths, two from teething, two from anæmia, one from pneumonia, and one from diarrhœa.

Sanitary Conditions.—The regiment was quartered in Fort Lascaris, with one detachment at St. Antonio's Gardens and another at Fort St. Angelo. The medical officer in charge, Surgeon-Major L. Manché, M.D., reports favourably on the sanitary condition of the barrack. The ventilation of the rooms was good and the accommodation sufficient. Ablution arrangements were satisfactory and water supply for drinking ample. The cooking arrangements are of a suitable character, and with regard to the plan of giving the men a money allowance in lieu of rations, the medical officer shows that it has worked better than he had anticipated owing to careful supervision of the canteen where the men get their supplies and where good wholesome food can be obtained at an inexpensive rate.

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III.—Cyprus.

Cyprus.

The average strength of warrant officers, non-commissioned officers and men serving in Cyprus during the year was 554, and the force comprised the headquarters and four companies of the 2nd Battalion Essex Regiment, some men of Departmental Corps, and Garrison Staff.

The principal statistics of sickness and mortality among the troops are shown in the subjoined table.

1891. Average Strength.	Admissions.	Deaths			Invalids		Average constantly Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
554	311	2	—	2	6	5	15·04	561·3	3·61	10·83	9·02	27·15

Comparing this table with a similar one for the preceding year a decrease of 35·1 per 1,000 is observed in the admission rate, one of 2·29 in the death rate, and one of 8·24 in that of constantly sick; and compared with average similar ratios for the previous ten years a decline is also observed, being as much as 279·8 per 1,000 in admission rate, 5·29 in the mortality rate, and 15·69 in the rate of constant inefficiency through sickness. The average sick time to each soldier was 9·91 days, and the average duration of each case of sickness 17·65 days, which are shorter than the corresponding periods in the previous year by 3·01 days and 4·01 days, and shorter than the similar average periods for the preceding ten years by 5·73 days and ·94 of a day respectively.

The stations occupied by the troops during the year were Polymedia, Limassol, Nicosia, and Troödos. The two former were occupied from January to June and again from October to December. During the interval all the troops were stationed at Mount Troödos. Nicosia was occupied by one company of the 2nd Battalion Essex Regiment from January to June, and again in December.

In Abstract XL. is a table showing the sickness and mortality of the troops in the Command by corps, but owing to the preponderance in numbers of the infantry over the staff and departments it is difficult to make useful comparison between them, but compared with a similar table for the previous year all ratios of sickness and mortality have declined.

With regard to the effect of age on sickness and mortality, it is calculated that the admission ratio among men under 20 years of age was 252·2 per 1,000, that among men between 20 and 25 years of age 803·8, that among men between 25 and 30 years of age 424·2, and that among men over 30 years of age 304·3 per 1,000. In the previous year also the highest admission rate was among men between 20 and 25 years of age. Compared with the ratios in that year those in the year under report have, with one exception, that between 25 and 30 years of age, decreased considerably. Of the deaths one man was 20 years of age and the other 27 years.

As to service in the Command it is found that the admission rate among men in their first year was 441·3 per 1,000, that among men in their second year 541·3, that among men in their third year 781·2, and that among men over three years' service in the Command 1913·0 per 1,000. In the preceding year the highest admission ratio was also among men over three years' service; but in each case the average annual strength was very small. Comparing the ratios with those of the previous year a decrease is observed in that of men under one year's service in the Command, but an increase has occurred in the remainder. Of the deaths one man was under one year's service, and the other over five years' service in the Command.

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Cyprus. The principal statistics of sickness and mortality arranged according to the several groups and orders of diseases are shown in Abstract IV.

GENERAL DISEASES.—*Diseases dependent on Morbid Poisons.*—There was no case of *eruptive fever*, and *enteric fever* was also absent from among the troops; in the previous year there were of the latter two cases and one death. The admissions for *simple continued fever* were 49 in number, equal to a ratio of 88·4 per 1,000, which is higher than the corresponding rate in the preceding year by 33·3, and above the average rate for previous five years by 25·3 per 1,000. Of the cases 32 occurred at Polymedia, 25 of them in the months of October and November; of the remainder of the cases 15 occurred at Mount Troödos and 2 at Nicosia. There were 2 cases of dysentery at Polymedia, neither of them severe. The remaining admissions in the first sub-group of diseases were 3 for mumps.

Malarial Fevers were the cause of 5 admissions, equal to a ratio of 9·0 per 1,000, which is only about a third of the corresponding rate in the previous year, and greatly below the average rate of the preceding five years. All the cases were ague; in four instances the men had served in other foreign stations previously.

Septic Diseases.—Erysipelas caused 2 admissions, both facial, and not severe, and due to local irritation.

Venereal Diseases.—The admissions for *primary syphilis* were 12 in number, being in the ratio of 21·7 per 1,000, rather more than half the corresponding rate in the previous year, and but little more than a fifth of the average ratio for the preceding five years. If to the above the sickness from simple venereal ulcer be added, admissions 2.4, and constantly sick 1·28, the ratio of admission for primary venereal sores was 65·0 per 1,000, which is lower by 5·8 than the similar rate in 1890, and by 83·0 than the quinquennial average rate. *Secondary syphilis* caused 6 admissions, or 10·8 per 1,000, which is below the last year's rate by 22·7, and the average rate by 39·0. *Gonorrhœa* gave 36 admissions, equal to 65·0 per 1,000, a decline of 9·8 from the previous year's rate, and of 33·0 from the average rate. Including all forms of venereal disease the total admission rate was 140·8 per 1,000, which is lower than the corresponding rate in the preceding year by 38·3, and below the average rate of five years by 155·0 per 1,000. The total amount of constant inefficiency from these diseases was equal to 9·56 per 1,000, less than in 1890 by 5·00, and less than the average rate by 13·12. It is stated that these diseases were generally mild in character during the year.

Debility.—Under this head 13 admissions are recorded, equal to a rate of 23·5 per 1,000, which is just double the corresponding rate in the preceding year.

Rheumatism.—There were 8 admissions, or 14·5 per 1,000, being below the last year's rate by 3·2 and below the average rate by 8·2 per 1,000. Among the cases treated there was one of rheumatic fever, which terminated favourably.

The remaining admission in this group of diseases was a case of non-malignant new growth of little importance.

LOCAL DISEASES.—*Diseases of the Nervous System.*—2 admissions only are returned and both of these were for epilepsy occurring in the same man. *Diseases of the eye* caused 3 admissions, two for ulcer of cornea and one for conjunctivitis. For *diseases of the circulatory system* there was only 1 admission, a case of palpitation. *Diseases of the respiratory system* caused 5 admissions, equal to 9·0 per 1,000, an increase of 3·1 on the last year's rate, but below the average rate of five years by 5·9. Of the cases 3 were bronchitis and 2 pleurisy. *Diseases of the digestive system*—40 admissions and 1 death are returned. The admission rate, 72·2 per 1,000, is higher than that in the preceding year by 13·2, but lower than the quinquennial average rate by 15·5. The principal causes of admission were affections of the mouth and throat 15 cases, diarrhœa 12, and dyspepsia 8 cases. The fatal case was one of diarrhœa. *Diseases of the lymphatic and glandular system* were the cause of 19 admissions, or 34·3 per 1,000, which is higher than the rate in the previous year by as much as 14·6, and above the average rate of five years by 9·7. *Diseases of the urinary system* caused only 2 admissions, both cases of inconti-

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nence of urine. *Diseases of the generative system* gave 30 admissions, principally for simple venereal ulcer; the admission rate was 54·1 per 1,000, an increase of 12·8 on the last year's rate and below the five-yearly average by 4·4. There were 3 admissions for *diseases of the organs of locomotion*, all cases of synovitis, and there were 14 admissions for *diseases of the connective tissue*, equal to a ratio of 25·3 per 1,000, about the average rate, but considerably higher than the rate in the previous year. *Diseases of the skin* caused an admission ratio of 48·7 per 1,000, which differs only fractionally from the corresponding rate in 1890, but is in excess of the quinquennial average rate. *Cyprus.*

Poisons.—Under this head there was a single admission from alcohol, the patient recovered; but a fatal case of alcoholic poisoning occurred out of hospital.

Injuries.—There were 27 admissions for local injury, the ratio being 48·7 per 1,000, a decline of 8·4 from the last year's rate and considerably below the average. The greater number of the admissions were due to wounds, contusions, and sprains of minor importance, but there was one case of gunshot wound, a man having accidentally shot himself through the hand with a revolver. There was one dislocation of the humerus caused while the man was at physical drill, and two fractures due to accidental injuries.

Invaliding.—The number of men invalided home during the year was 6, being in the ratio of 10·83 per 1,000, which is higher by ·99 than in the previous year, but lower by 3·01 than the average ratio for the preceding ten years. Four of the invalids belonged to the Essex Regiment and two to departmental corps. One of the men was under 20 years of age, one between 20 and 25 years of age, three between 25 and 30 years and one over 30 years. With regard to service in the Command, two men were in their first year and four were over three years. The causes of invaliding were debility 5 cases, and epilepsy 1 case.

The number of men discharged the service by invaliding was 5, equal to a ratio of 9·02 per 1,000, which is higher than that in the preceding year by 7·05, and above the decennial average rate by 4·24. The disabilities necessitating final discharge were mental disease, epilepsy, scrofula, abscess of the liver, and stricture of the urethra, one case respectively.

Officers.—The average strength of officers was 23, and the number of attacks of illness 9. The ratio of prevalence of sickness, therefore, was 391·3 per 1,000, an increase of 304·4 on the last year's rate. The cases of sickness were for the most part of minor importance. One officer was invalided for debility.

Women.—The average strength was 26, and there were 6 admissions, being in the ratio of 230·8 per 1,000, a considerable decline from the rate in the previous year. All the cases were of a simple character. One woman was invalided for debility.

Children.—The average strength of children was 50, among them there were only 8 admissions, but there was one death. The admission rate was 160·0 per 1,000, a decrease of 297·6 from the rate in 1890. The fatal case was one of infantile convulsions consequent on teething.

Sanitary Conditions.—The Senior Medical Officer, Brigade Surgeon Lieut.-Colonel W. E. Riordan, reports that the camp at Polymedia is in a satisfactory sanitary condition, and the only improvement effected during the year was the erection of shower baths in the ablution rooms in barracks. The camp, situated on elevated rocky ground, is drained by means of open surface drains, while there are a few underground drains which, owing to some defect in construction, are not so entirely satisfactory from a sanitary point of view as the open system. Some recommendations for improved means of fumigation and disinfection of clothing and bedding in the event of the occurrence of infectious disease were put forward during the year. The general sanitary condition of the depôt for supplies and stores situated close to the town of Limassol is said to be generally satisfactory. The wooden huts, occupied by the married families, owing to original faulty construction rest on the ground, which is on a low level, consequently they are rather damp during the rainy season. Some improvements were made in the drainage of the depôt by re-laying the open drains with blocks of cement instead of the old cobble stone which was previously used. The water supply both for the depôt and the

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Cyprus.

camp at Polymedia is brought in from a spring at a distance by a covered aqueduct and stored in a reservoir. At the depôt there is also a supply from wells, which, although good, is only used for cattle and for general purposes. At Nicosia the sanitation is reported to be satisfactory and requires no special mention. At Troödos the sanitary condition of the camp is very satisfactory, the water supply obtained from a pure source is good and sufficient for all purposes. A shower bath was erected for the use of the men in the South Camp, and it is said that these baths might with advantage be increased in number. The cooking, hitherto carried out by means of camp kettles and field ovens, is thought by the Senior Medical Officer to admit of much improvement, now that the site has become a permanent encampment during the summer months.

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IV.—ON THE HEALTH OF THE TROOPS SERVING IN THE DOMINION OF CANADA.

Sickness and Mortality.

Canada.

The average strength of the garrison was 1,424. The troops consisted of the head-quarters No. 3 Company and a detachment No. 17 Company, Western Division, Royal Artillery, the 18th and 40th Companies Royal Engineers, detachments Army Service Corps, Medical Staff Corps, and Ordnance Store Corps, and Garrison Staff throughout the year; also the 2nd Battalion West Riding Regiment until 9th March, when it left for the West Indies on relief by the 1st Battalion Leicestershire Regiment from Bermuda. All the troops were stationed at Halifax, the only station in Canada now occupied.

The principal statistics of sickness and mortality are given in the following table:—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
1,424	531	7	1	8	11	18	24·37	372·8	5·61	7·72	12·64	17·11

Compared with corresponding results in the previous year a decline of 61·6 per 1,000 is observed in the ratio of admission, and one of 8·14 in that of constantly sick, but the death rate is increased by ·54, and compared with similar average ratios for the preceding ten years the decrease in admission rate is as much as 265·5, and that in the rate of constant inefficiency through sickness as much as 18·48, but the death rate still shows a slight increase, ·40 per 1,000.

The average sick time to each soldier was 6·25 days, and the average duration of each case of sickness 16·75 days, which are shorter than the corresponding periods in the previous year by 2·97 days and 4·47 days, and shorter than the similar decennial average periods by 6·74 and 3·60 days respectively.

In Abstract XL. will be found the more important health statistics of the different arms of the service and of individual corps. Of the arms of the service the artillery gave the highest admission rate, 455·9 per 1,000, followed by the infantry with 372·5, and the engineers with 275·9; the mortality rate in the artillery was 8·82, in the infantry 5·64, and in the engineers *nil*; the constantly sick in the Artillery equalled 23·65 per 1,000, in the infantry 16·43, and in the engineers 11·03. Of individual corps the highest admission ratio was 514·6 per 1,000 in the detachment 17th Company, Western Division, Royal Artillery, and, excluding departmental corps, the lowest was in the 40th Company Royal Engineers. The highest mortality rate was 12·66 per 1,000 in No. 3 Company, Western Division, Royal Artillery, while in the 17th Company, Western Division, and in the two companies of engineers there was no mortality. The highest annual ratio of constantly sick was 29·39 per 1,000, in the 2nd Battalion West Riding Regiment, and the lowest, 8·33, in the 40th Company Royal Engineers.

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Canada.

With regard to the influence of age and length of service in the Command on the sickness and mortality, it is found that the ratio of admission among men under 20 years of age was 1,025·0 per 1,000, that among men between 20 and 25 years of age, 344·8, that among men between 25 and 30 years, 424·0, and that among men over 30 years, 216·2 per 1,000. In the previous year also the admission rate among men under 20 years of age was far higher than that among men at any other period of age. Comparing the ratios with the corresponding rates in the preceding year there is a decrease in that among men between 20 and 25 years, but there is an increase in all other rates though only marked in the case of men under 20 years of age. Of the deaths in the Command, one, or 25·00 per 1,000, was that of a man under 20 years, three, or 3·22 per 1,000, were among men between 20 and 25 years of age, one, or 2·92 per 1,000, a man between 25 and 30 years of age, and two, or 18·02 per 1,000, among men over 30 years of age. As to length of service in the Command it is calculated that the ratio of admission among men in their first year was 433·3 per 1,000, among men in their second year, 310·1, among men in their third year, 269·0, and among men over three years' service, 236·6 per 1,000. In the previous year also the highest admission ratio was among men in their first year of service in the Command, a decrease occurring in each succeeding year. With the exception of that among men over three years service in the Command all the ratios in the year under report are lower than those corresponding in the previous year. Of the deaths, six, or 7·08 per 1,000, occurred among men in their first year of service in the Command, and the other one, equal to a rate of 5·08 per 1,000, in the third year of service. In the preceding year the deaths took place among men in their second and third years of service, five and two respectively.

In Abstract V. will be found the sickness, mortality, and invaliding arranged according to the different groups and orders of diseases.

General Diseases.—*Diseases dependent on Morbid Poisons.*—There were no cases of *eruptive fevers* admitted amongst the troops, though, it is said, scarlet fever was as usual prevalent among the civil population. *Enteric fever* also was absent, though in the previous year there were five cases. 3 admissions are returned for *simple continued fever*, 12 for influenza, and 2 for mumps.

Malarial Fevers were represented by two cases of ague, and *septic diseases* by three cases of erysipelas, all of which were mild and did well.

Venereal Diseases.—The number of admissions for *primary syphilis* was 30, equal to a ratio of 21·1 per 1,000, which is lower than the corresponding rate in the previous year by 10·0, and than the average rate of the five preceding years by 8·6. There were no cases of simple venereal ulcer returned in the year under report. *Secondary syphilis* caused 14 admissions, being in the ratio of 9·8 per 1,000, which is lower than the rate in 1890 by 21·3, and below the quinquennial average rate by 18·7. *Gonorrhœa* was the cause of 56 admissions, or 39·3 per 1,000, a decline of 2·0 from the previous year's rate, and one of as much as 32·1 when compared with the average rate of five years. Including all forms of venereal disease the total admission rate was 7·02 per 1,000, a decrease of 37·7 from the previous year's rate and one of 68·1 from the quinquennial average rate. The total ratio of constant inefficiency on account of these diseases was equal to 3·78 per 1,000 as compared with 6·59 in 1890 and with 9·12 the average rate of five years.

Under the head of *alcoholism* two admissions are shown, one of which was a case of delirium tremens. *Debility* caused 5 admissions as compared with 7 in the previous year. *Rheumatism* was the cause of 35 admissions, being in the ratio of 24·6 per 1,000, which is higher than the corresponding rate in the preceding year by 9·4, but lower than the average rate of the previous five years by 9·6. Among the admissions there were eight cases of rheumatic fever.

Tubercular Diseases.—5 admissions are returned and 2 deaths, including one of an invalid; all were cases of lung affection. The admissions for *other diseases* were two for non-malignant new growth.

Local Diseases.—*Diseases of the Nervous System* caused 9 admissions, equal to a ratio of 6·3 per 1,000, which is above the corresponding rate in the preceding year by 2·0, but below the average rate of five years by 4·6. The

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admissions were two for inflammation of the brain or its membranes, both fatal, four for vertigo, and one for paralysis, epilepsy, and neuralgia respectively. *Canada.*

Diseases of the Eye were the cause of 12 admissions, or 8·4 per 1,000, differing but little from the last year's rate, but below the average rate.

Diseases of other Organs of Special Senses were the cause of 9 admissions, seven being for aural diseases and two for nasal affections.

Diseases of the Circulatory System.—9 admissions are returned and 2 deaths. The admission ratio, 6·3 per 1,000, is lower than in the previous year by 6·7, and than the average rate by 6·5. The cases included 3 of pericarditis, one of which was fatal, 4 of valve disease, 1 of hypertrophy, and 1 of palpitation of the heart. There was one death out of hospital from rupture of the heart.

Diseases of the Respiratory System gave 35 admissions, or 24·6 per 1,000, which is a lower rate than in the previous year by 10·9, and below the average by 16·2. Of the admissions 24 were for bronchial affections, 5 for pleurisy, 3 for pneumonia, and 3 for hæmoptysis.

Diseases of the Digestive System.—The admissions numbered 78 and there was 1 death The admission ratio, 54·8 per 1,000, is lower by 5·3 than the previous year's rate and than the average rate by 15·1. Among the admissions were 41 for follicular tonsillitis, 7 for dyspepsia, and 7 for hernia; one death occurred from peritonitis.

Diseases of the Lymphatic and Glandular System.—There were 22 admissions, equal to 15·5 per 1,000, which is higher than the last year's rate, and than the average rate.

Diseases of the Urinary System caused 5 admissions, as compared with 3 in the previous year.

Diseases of the Generative System.—17 admissions are recorded, or 11·9 per 1,000, a decline of 9·1 from the last year's rate, and 16·6 from the average rate. The principal cause of admission was orchitis.

Diseases of the Organs of Locomotion caused 10 admissions, equal to 7·0 per 1,000, rather below the previous year's rate, and also below the average rate. Synovitis caused most of the admissions.

Diseases of the Connective Tissue.—23 admissions are returned, or 16·2 per 1,000, a decrease both from the last year's rate and the average rate.

Diseases of the Skin caused 35 admissions, scabies and ulcer being the chief causes. The ratio of admission, 24·6 per 1,000, shows a decline of 5·8 from the rate in 1890, and one of 13·5 from the average rate.

Injuries were 94 in number and there was one death. The admission ratio, 66·0 per 1,000, differs very little from the average rate, but is above the previous year's rate by 13·9. Most of the admissions were due to contusions, wounds, or sprains. The death was due to asphyxia by submersion.

Invaliding.—The number of men invalided home during the year was 11, equal to a ratio of 7·72 per 1,000, which is below the corresponding rate in the preceding year by 7·48, and below the average rate for the previous ten years by 14·50. Of the men invalided 5 belonged to the artillery, or 14·70 per 1,000, 1 to the Engineers, or 6·89 per 1,000, and 5 to the infantry, or 5·64 per 1,000. With regard to age 1 man, or 25·00 per 1,000, was under 20 years of age, 5 men, or 5·37 per 1,000, were between 20 and 25 years of age, 4 men, or 11·70 per 1,000, were between 25 and 30 years of age, and one man, or 9·01 per 1,000, was over 30 years. As to service 9 men, or 10·63 per 1,000, were in their first year of service in the country, 1 man, or 34·84 per 1,000, was in his second year, and 1 man, or 5·08 per 1,000, was in his third year of service. The causes of invaliding were tubercular disease of the lungs 3 cases, nervous diseases 2 cases, and retinitis, pericarditis, pleurisy, Bright's disease, urethral stricture, and frost bite one case respectively.

The number of men finally discharged as medically unfit for further service was 18, including 4 discharged in the Command. The invaliding ratio, 12·64 per 1,000, was above the rate in 1890 by a small fraction, and below the decennial average rate by 7·11. The disabilities necessitating discharge were diseases of the circulatory system 6 cases, injuries 3, tubercular disease, nervous affections, and diseases of the respiratory system 2 cases each, and debility, scrofula, and stricture of urethra one case respectively.

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Canada.

Officers.—The average strength of officers was 64, and there were 37 attacks of illness, being in the ratio of 578·1 per 1,000, which is above the corresponding rate in the preceding year by 214·5. Few of the cases were serious and there were no deaths. One officer was invalided for cystitis.

Women.—The average strength was 125, and there were 15 admissions, and 3 deaths, being in the ratios of 120·0 and 24·0 per 1,000 respectively as compared with 310·6, and *nil* in the preceding year. Among the cases treated were 3 of rheumatism, 3 of nervous diseases, and 3 of diseases of the digestive system. The deaths were one from septicæmia, debility, and meningitis respectively.

Children.—The average strength was 233, and there were 35 admissions and 3 deaths, being in the ratios of 150·2 and 12·88 per 1,000, the former being lower by 374·6 and the latter by 24·31 than the corresponding rate in the previous year. The principal causes of sickness were chicken-pox 7 cases, whooping-cough 6, and bronchial affections 9 cases. The deaths were two from bronchitis and one from convulsions.

Sanitary Conditions.—The Principal Medical Officer, Surgeon Colonel S. Archer, reports that the health of the troops was excellent throughout the year, and there has been no prevalence of disease attributable to local insanitary conditions.

The sanitary condition of the barracks and quarters is reported to have been generally satisfactory, though many of the occupied buildings are old and faulty in construction. There was no overcrowding. Ventilation is effected chiefly by means of open fireplaces and opposite windows; in few of the barracks has any special system been adopted. The water supply is ample and the quality good. It is conveyed by iron mains from the source at some little distance. Conservancy is attended to satisfactorily, the arrangements are latrines on the water system at Wellington barracks and earth closets elsewhere. The lighting of the barracks by kerosine oil is not found to be satisfactory. The rations were of good quality; the means of cooking at Wellington barracks are Deane's ranges, but at the Citadel, South barracks, and Glacis barracks, old-fashioned ovens and boilers are still the only means provided. In the station hospital the accommodation is ample, and the ventilation and lighting satisfactory. A great improvement was effected during the year in the warming of the wards, by the introduction of the system of hot water pipes. At present only two of the large wards and the passages are so warmed, but it is hoped it will be extended to the whole building before long.

Among the improvements which have been effected in the course of the year may be mentioned, relaying the drain-pipe from the back of the Royal Artillery park, and leading it into a new city sewer in Queen Street, a disconnecting pit being also added; several additions to the drainage of the South barracks and Station hospital; and at various places the conversion of latrines into dry-earth closets.

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V.—ON THE HEALTH OF THE TROOPS SERVING IN BERMUDA.

Sickness and Mortality.

Bermuda.

The average strength of warrant officers, non-commissioned officers and men serving in the Command during the year was 1,601, and the force was composed as follows:—The 1st Company, Western Division, Royal Artillery, the 27th and 36th Companies, Royal Engineers, detachments Army Service Corps, Medical Staff Corps, and Ordnance Store Corps throughout the year; the 2nd Battalion Grenadier Guards until 14th July, when it left for England, and the 1st Battalion Leicestershire Regiment, until the 27th of February, when it left for Halifax, having been relieved by the 1st Battalion the King's (Liverpool Regiment) from England.

The more important of the statistics of sickness, mortality, and invaliding, are shown in the subjoined table:—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharg'd.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
1,601	773	5	—	5	24	17	40·69	482·8	3·12	14·99	10·61	25·42

Comparing these results with those shown in a similar table for the preceding year, a decrease of 156·2 per 1,000 has occurred in the admission ratio, one of 10·46 in the death rate, and one of 3·46 in the constantly sick rate, and, compared with corresponding average ratios for the previous ten years, a decline is also observed in all these ratios, being 141·1 in the case of admissions, 7·37 in that of mortality, and 6·77 in that of constant inefficiency through sickness. The average sick time to each soldier was 9·28 days, which is shorter than the corresponding period in the previous year by 1·26, and than the average similar period for the preceding ten years by 2·47 days. The average duration of each case of sickness was 19·21 days, being longer than in 1890 by 2·72 days and than the decennial average period by ·38 of a day.

The sickness and mortality among the troops arranged according to arms of the service and individual corps are shown in Abstract XL. The highest annual admission ratio in any corps was 590·5 per 1,000 in the 2nd Battalion Grenadier Guards, with head-quarters at St. George's, the next being 541·2 in the 1st Battalion King's (Liverpool Regiment) at Prospect; the lowest annual admission rate, omitting those of detachments departmental corps, was 298·6 in the 1st Battalion Leicestershire Regiment, the next above being 340·7 in the 36th Company, Royal Engineers. Of the deaths, 4, or 5·79 per 1,000, occurred in the 1st Battalion the King's (Liverpool) Regiment, and 1, or 3·17 per 1,000, in the 2nd Battalion Grenadier Guards. The highest ratio of constantly sick was 32·03 per 1,000 in the 2nd Battalion Grenadier Guards, the next being 27·66 in the 1st Company, Western Division, Royal Artillery; the lowest ratio was 15·60 in the 36th Company, Royal Engineers.

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Bermuda.

With regard to the influence of age on sickness and mortality it is found that the admission ratio among men under 20 years of age was 717·2 per 1,000, that among men between 20 and 25 years of age 533·9, that among men between 25 and 30 years 386·9, and that among men over 30 years of age 248·4 per 1,000. In the preceding year the highest admission ratio was among men between 20 and 25 years of age. Compared with corresponding rates in the previous year an increase is observed in that of men under 20 years, but a decrease is observed in all the other ratios. All the deaths were among men between 20 and 25 years of age. As to the influence of service in the Command the admission ratio of men in their first year of service was 515·2 per 1,000, that among men in their second year 411·8, that among men in their third year 419·7, and among men over three years' service 308·8 per 1,000. In the previous year also the highest rate was among men in their first year of service, and all the ratios were higher than the corresponding ones in the year under report. All the deaths occurred among men in their first year of service in the Command.

The principal statistics of sickness and mortality according to the different groups and orders of diseases are shown in Abstract VI.

General Diseases.—*Diseases dependent on Morbid Poisons.—Enteric fever* caused 27 admissions and 5 deaths, being in the ratios of 16·9 and 3·12 per 1,000 respectively. Compared with corresponding ratios in the previous year there is a decrease of 23·2 in the admission rate and 3·35 in the death rate, and compared with average ratios for the previous five years there is a decline of 27·7 in the ratio of admissions, and one of 3·83 in the rate of mortality. The per-centage of mortality to attack was 18·5 as compared with 16·1 in the previous year, and with 15·6 the average of five years. The cases were distributed throughout the Command as follows:—Prospect, 16 cases and 3 deaths; St. George's, 7 cases and no death; and Boaz, 4 cases and 2 deaths. All the deaths occurred in men who had under one year's service in the Command. The Senior Medical Officer, Brigade Surgeon Lieut.-Colonel J. Ross Murray, M.D., states that "no insanitary conditions have been discovered "locally to account for the cases occurring. Every attention has been paid "to ensure a pure supply of water; frequent analyses have been made when "there was the slightest suspicion of impurity, and a periodical cleaning of "the tanks systematically has been established. The system of drainage has "generally worked satisfactorily, and any defects detected have been promptly "remedied. Particular attention has been devoted to secure a good supply "of mineral waters at the different stations, and all suggestions regarding the "health of the troops have been promptly attended to. No improvements "have been made in the sanitation of the principal town as regards disposal "of sewage or ordure, or in securing a water supply above suspicion, and I "still regard these centres as the original foci from which the disease has "been disseminated throughout the islands. It is a matter for congratulation "that the regiment of Guards, arriving as they did at almost the most "unhealthy season, and composed, as it was, greatly of young soldiers, "escaped so lightly and that the King's (Liverpool Regiment) has had so "few cases during its first year of service in these islands as compared with "the severity with which the Leicestershire Regiment suffered on their arrival "in the Command."

Simple Continued Fever caused 21 admissions, chiefly due, it is said, to exposure to the sun. The admission ratio, 13·1 per 1,000, was lower than the corresponding rate in the previous year by 31·5, and below the average rate of the preceding five years by 18·0. Of the cases 12 occurred at Prospect, 7 at St. George's, and 2 at Watford.

Influenza caused 8 admissions, all early in the year, and of a mild type.

Malarial Fevers were entirely absent. The Senior Medical Officer thinks this worthy of note considering the presence of several large mangrove swamps in the island, which in more tropical climates are generally regarded as hot-beds for the production of malaria.

Septic Diseases were represented by a single case of erysipelas.

Venereal Diseases.—Only 9 cases of *primary syphilis* occurred, giving an admission ratio of 5·6 per 1,000, which is lower than the similar rate in the previous year by 7·3, and below the average rate of five years by 14·2. In-

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cluding 7 admissions for simple venereal ulcer the admission ratio for primary venereal sores was 10·0 per 1,000, a decline of 6·8 from the previous year's rate, and of 16·4 from the average rate. The admissions for *secondary syphilis* was 35 in number, equal to a ratio of 21·9 per 1,000, which differs only fractionally from the quinquennial average rate, and is below the last year's rate by 6·6. *Gonorrhœa* was the cause of 19 admissions, being in the ratio of 11·9 per 1,000, which differs from the rate in the previous year only by a very small fraction, but is below the average rate by 9·8. Taking all forms of venereal disease together the admission ratio was 43·8 per 1,000, a decrease of 13·1 from the rate in the previous year, and of 27·1 from the quinquennial average rate. The total amount of constant inefficiency from these diseases was equal to 3·49 per 1,000, less than in 1890 by 1·03, and below the average rate by 1·79. *Bermuda*

Parasitic Disease caused one admission, a case of tænia solium. There were 14 cases of *alcoholism*, including 3 of delirium tremens.

Debility gave an admission ratio of 8·1 per 1,000, less than half the corresponding rate in the previous year.

Rheumatism was the cause of 17 admissions, including one for rheumatic fever. The admission rate, 10·6 per 1,000, is lower than in the previous year by 8·2 and than the average rate by 9·9.

The remaining four admissions for general diseases were cases of non-malignant new growth.

Local Diseases.—*Diseases of the Nervous System* caused 23 admissions, equal to 14·4 per 1,000, which is higher than the corresponding rate in the previous year by 6·7 and than the average rate of the preceding five years by 7·1. The principal cause of admission was neuralgia 16 cases, and the remainder comprised 3 of epilepsy, 2 of mental affections, one of vertigo, and one of tetanus.

Diseases of the Eye.—15 admissions are returned, 7 of which were for conjunctivitis. The admission ratio, 9·4 per 1,000, is below the last year's rate by 5·5 and below the average rate by 5·7.

Diseases of other Organs of Special Senses caused an admission ratio of 4·4 per 1,000, a decline of 5·9 from the ratio in 1890, and below the average rate by 5·1. Of 7 cases treated 6 were inflammation of external meatus and 1 epistaxis.

Diseases of the Circulatory System caused only 4 admissions, two for palpitation, one for valvular disease, and one for phlebitis. The ratio of admission, 2·5 per 1,000, is considerably below the average, and below the previous year's rate by 1·4.

Diseases of the Respiratory System caused 26 admissions, equal to 16·2 per 1,000, a decrease of 21·9 from the corresponding rate in the previous year, and of 14·9 from the average rate of five years. Bronchial affections caused 17 admissions, and of the remainder the principal cause was pleurisy, 4 cases.

Diseases of the Digestive System.—137 admissions are recorded, giving an admission rate of 85·6 per 1,000, lower than in the preceding year by 33·4, and than the quinquennial average rate by 25·8. The chief causes of admission were diarrhœa 66 cases, affections of the mouth and throat 29, and dyspepsia 16 cases.

Diseases of the Lymphatic and Glandular Systems gave an admission ratio of 6·9 per 1,000, a good deal below the average rate.

Diseases of the Urinary System caused only 3 admissions, two for incontinence of urine, and one for cystitis.

Diseases of the Generative System were at the ratio of 16·9 per 1,000, somewhat below the ratio in the previous year. Simple venereal ulcer, balanitis, and urethral stricture were the chief causes of admission.

Diseases of the Organs of Locomotion.—21 admissions are returned, the principal cause being synovitis; the admission ratio is increased by 4·7 from last year's rate.

Diseases of the Connective Tissue.—The admission ratio, 36·2 per 1,000, is above the average but rather below the previous year's rate.

Diseases of the Skin.—74 admissions are recorded, being in the ratio of 46·2 per 1,000, lower than the average rate by 14·7, but above the previous year's rate by 6·1. Scabies, ulcer, and eczema were the chief causes of sickness.

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Bermuda.

Injuries.—192 are returned. The admission rate, 119·9 per 1,000, shows an increase of 18·3 on the rate in the preceding year, and of 15·4 on the average rate of five years. General injuries were represented by two cases of multiple injury and the greater part of the cases of local injury was caused by contusions, wounds, and sprains.

Invaliding.—The number of men invalided home during the year was 24, being in the ratio of 14·99 per 1,000, which is higher than the corresponding rate in the preceding year by 1·41, and by a fraction higher than the average rate for the previous ten years. Of the arms of the service the Artillery gave the highest invaliding ratio, 27·52 per 1,000, the Infantry the next, 15·57, then the Engineers, 12·50, and lastly the Guards, 9·52 per 1,000. 14, or 14·37 per 1,000, of the men invalided were between 20 and 25 years of age, 9 men, or 24·41 per 1,000, between 25 and 30 years, and 1 man was over 30 years of age. These ratios are higher than the corresponding rates in the previous year. With regard to service in the Command, 13 men, or 11·27 per 1,000, were in their first year, 3 men, or 16·04 per 1,000, in their second year, 6 men, or 31·09 per 1,000, in their third year, and 2 men, or 29·41 per 1,000, were over three years' service in the Command. The principal causes of invaliding were injuries, 5 cases, debility, 4, tubercular disease, 3, and diseases of the respiratory system, 3 cases.

The number of men finally discharged as medically unfit for further service was 17, equal to a ratio of 10·61 per 1,000, which is below the previous year's rate by 1·03, but fractionally above the decennial average rate. The principal disabilities necessitating discharge were tubercular disease, 3 cases, nervous affections 3, and injuries, ophthalmic affections and respiratory disease 2 cases respectively.

Officers.—The average strength was 70 and there were 19 cases of sickness, being in the ratio of prevalence of 271·4 per 1,000, a decline of 77·8 from the last year's rate. Among the cases treated were 4 of influenza and 3 of simple continued fever. Two officers were invalided, one for dysentery and the other for psoriasis.

Women.—The average strength was 101 and there were 35 admissions, or 346·5 per 1,000, a decrease of 77·4 from the last year's rate. The chief causes of sickness were affections of the generative system and debility, and among the remainder of the cases were two of enteric fever, and one of mania.

Children.—The average strength was 165, and the cases of sickness 81 in number and there were 5 deaths. The ratio of sickness was 490·9 and that of mortality 30·30 per 1,000, the former being lower by 342·4 and the latter higher by 17·48 than the corresponding rate in the previous year. The diseases causing most sickness were diarrhœa, bronchial affections, and eczema, and among the remainder were three cases of enteric fever, and one of scarlet fever.

Sanitary Conditions.—The Senior Medical Officer reports that the general sanitary condition of barracks and hospitals were good, the details were carefully attended to and no local causes of disease exist as far as can be seen.

At Prospect a new hospital was in course of erection and at the close of the year was approaching completion. The situation is excellent, it is thoroughly exposed to the prevailing winds, and from its verandah in the upper storey there is a beautiful and extended view to seaward. During the year a block of two-storied stone barracks was commenced; it occupies the former site of huts on the Prospect ridge, and it is intended to replace the remaining huts by other similar blocks; three of these blocks will supply sufficient accommodation for the troops at Prospect.

At St. George's the state of sanitation in connexion with barracks has been satisfactory with one or two exceptions. The drain pipes discharging into the sea from barracks on the north-east shores were found to be broken during storms, and did not therefore discharge at a sufficient depth; remedial measures were adopted. A second reserve steam pump was supplied during the year for the purpose of pumping up salt water for flushing latrines. The system of conservancy is partly by flushing with water and partly the dry earth system. With regard to the latter it is stated that it is difficult to carry out satisfactorily in the islands generally, and it requires constant care and supervision. At Boaz the sanitary conditions are generally satisfactory, but it is

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said that the burial ground is too near the hospital, and it is thought might be a source of danger owing to its proximity and the calcareous nature of the soil rendering it unsuitable for burials. As there is no available site on the island to remove it to, the Senior Medical Officer suggested that interments should take place in one of the little islets in the harbour at no great distance; there is difficulty, however, in appropriating an island for the purpose, and the suggestion has not been carried out, but endeavours have been made to improve the existing ground by bringing over a large supply of proper earth to be used over the land and to fill up graves when made.

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VI.—ON THE HEALTH OF THE TROOPS SERVING IN THE WEST INDIES.

Sickness and Mortality.

I.—White Troops.

West Indies.

The average strength of the troops serving in the West Indies during the year was 1,096, of which 631 were in the Barbados Command, and 465 in the Jamaica Command. In the Barbados Command the force consisted of No. 3 Company, Western Division, Royal Artillery, the headquarters 2nd Battalion York and Lancaster Regiment which embarked for Natal on 28th March, having been relieved by the headquarters 2nd Battalion West Riding (Duke of Wellington's) Regiment from Halifax, detachments Royal Engineers and Departmental Corps, white non-commissioned officers West India Regiment, and Garrison Staff. At St. Lucia were the headquarters of the company of Artillery, a few men of the Engineers and Departmental Corps throughout the year, and a company of Infantry arrived in December; all the rest of the troops were stationed at Barbados. In the Jamaica Command were the 10th Company, Western Division, Royal Artillery; detachments, Royal Engineers; three companies 2nd Battalion the West Riding Regiment from 18th March, having then relieved three companies 2nd Battalion York and Lancaster Regiment; white non-commissioned officers West India Regiment, detachments Departmental Corps and Garrison Staff. All the troops were stationed at Jamaica, except one man at Nassau; the average strength at Up Park Camp being 66, that at Newcastle 307, and that at Port Royal 91.

The principal statistics of sickness and mortality among the troops in the two divisions, as well as among those serving in the West Indies, taken as a whole, are given in the following table:—

1891.	Average Strength.	Admissions.	Deaths			Invalids	
			In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.
Barbados Command - - -	631	1,030	7	—	7	13	5
Jamaica Command - - -	465	361	8	—	8	7	5
West Indies - - -	1,096	1,391	15	—	15	20	10

(*continued.*)

1891.	Average constantly Sick.	Ratio per 1,000 of Strength.				
		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
Barbados Command - - -	60·32	1632·3	11·09	20·60	7·92	95·59
Jamaica Command - - -	22·46	776·3	17·20	15·05	10·75	48·30
West Indies - - -	82·78	1269·1	13·69	18·25	9·12	75·53

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Comparing the ratios of sickness in the Barbados Command with the corresponding rates in the previous year, it is found that there is an increase of as much as 278·4 in the rate of admission, one of 2·29 in the rate of mortality, and one of 22·72 in the rate of constantly sick. The average duration of each case of sickness, 21·37 days, is longer than the corresponding period in the previous year by 1·73 days, and the average sick time to each soldier, 34·89 days, longer by 8·29 days. *West Indies*

In the Jamaica Command, on the contrary, there is a decrease of as much as 215·3 per 1000 in the admission rate as compared with the previous year's rate, and one of 7·14 in the rate of constantly sick, but the mortality rate shows an increase of 6·70 The average sick time to each soldier was 17·63 days, and the average duration of each case of sickness 22·71 days, the former shorter by 2·61 days and the latter longer by 2·30 days than the corresponding ratios in the preceding year.

Taking the West Indies as a whole, the admission ratio is increased by 80·4 as compared with the corresponding rate in the previous year, the death rate is increased by 4·11, and the constantly sick rate by 10·61; and compared with similar average ratios for the preceding ten years the admission ratio is increased by 234·1, and the rate of constant inefficiency through sickness by 24·37, but there is a fractional decrease in the death rate. The average sick time to each soldier was 27·57 days, which is longer by 3·88 days than the corresponding period in the preceding year, and by 8·90 than the similar average period in the preceding ten years. The average duration of each case of sickness was 21·72 days, being longer than in 1890 by 1·79 days, and than the decennial average period by 3·68 days.

The more important of the statistics of sickness and mortality among the different arms of the service and corps which served in the West Indies during the year will be found in Abstract XL.

In the Barbados Command the battery of Artillery No. 3 Company, Western Division, at St. Lucia, with a detachment at Barbados, gave an admission ratio of 2376·0, and a constantly sick rate of 132·82 per 1,000, in excess of the corresponding rates in the previous year. The death rate was 42·73 per 1,000, dependent on 3 deaths, two from remittent fever and one from pleurisy. In the infantry the annual admission and constantly sick rates were 1114·6 and 78·02 respectively in the 2nd Battalion York and Lancaster Regiment for three months at Barbados, and 1700·3 and 99·75 in the 2nd Battalion West Riding Regiment for nine months at Barbados with a detachment at St. Lucia just at the close of the year. In the latter regiment there were two deaths; there were also two deaths of non-commissioned officers, one belonging to the Army Pay Department, and the other to the West India Regiment.

At Jamaica the 10th Company, Western Division, Royal Artillery, headquarters at Newcastle, with detachments at Port Royal and Up Park Camp, gave admission and constantly sick rates of 810·8 and 60·81 per 1,000, the former being lower and the latter higher than the corresponding rate in the previous year. Four deaths occurred in this company, all from yellow fever. In the infantry the annual admission and constantly sick rates for the wing of the 2nd Battalion York and Lancaster Regiment were 1000·0 and 82·71 respectively, for two months at Newcastle, with a detachment at Up Park Camp; the annual rates for the wing of the 2nd Battalion West Riding Regiment at the same places for nine months were 838·7 and 45·25 per 1,000. There were 4 deaths in the infantry, two in each regiment, and one in each of these was due to enteric fever.

With regard to the influence of age on sickness and mortality in the West Indies, it is found that the admission rate among men under 20 years of age was 767·9 per 1,000, that among men between 20 and 25 years of age 1679·7 per 1,000, that among men between 25 and 30 years 1071·4, and that among men over 30 years of age 689·1 per 1,000. Compared with corresponding ratios in the previous year, those among men between 20 and 25 years and between 25 and 30 years of age show an increase, but the other two a decrease. The sequence of ratios is similar to that in the preceding year. As to mortality there was 1 death, equal to 17·84 per 1,000, among men under 20 years of age; 7, or 15·21 per 1,000, among men between 20 and 25 years of age; 5, or 10·82 per 1,000, among men between 25 and 30 years of age; and 2, or 16·81

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West Indies. per 1,000, among men over that age. In the preceding year the highest death ratio was among men over 30 years, and there was no mortality among men under 20 years of age.

With regard to length of service in the Command, it is found that the admission ratio among men in their first year of service was 1396·1 per 1,000, that among men in their second year 1539·7, that among men in their third year 660·7, and that among men over three years' service 1231·7. Compared with corresponding results in the previous year the ratios among men in their first and second year of service in the Command show an increase, but in the other two a decrease is observed. The sequence of ratios is very similar to that in the previous year. As to mortality, there were 3 deaths, or 4·84 per 1,000, among men in their first year of service in the Command; 5, or 26·45 per 1,000, among men in their second year; 5, or 22·32 per 1,000, among men in their third year, and 2, or 142·86 per 1,000, among men over three years' service in the Command. With the exception of that among men in their first year of service these death ratios all show an increase as compared with those in the preceding year.

The most important of the statistics of sickness and mortality arranged according to the different groups and orders of diseases are shown in Abstract VII.

General Diseases.—*Diseases dependent on Morbid Poisons.*—Under the head of *eruptive fevers*, a single admission for measles is recorded; it occurred at Up Park Camp, Jamaica.

Enteric fever caused 15 admissions and 3 deaths, being in the ratios of 13·7 and 2·74 per 1,000 respectively, which are higher than the corresponding ratios in the previous year by 5·1 and 1·78 per 1,000, and above the similar average ratios for the preceding five years by 1·5 and ·52 per 1,000. The percentage of mortality to attack was 20·0 as compared with 11·1 in 1890, and with 18·2 the average rate of five years. In Barbados there were 5 cases of enteric fever, with one death. The admission ratio was 7·9, and the death rate 1·58 per 1,000. No special cause was discovered as likely to have originated these cases. In the Jamaica Command, 10 cases and 2 deaths occurred, being in the ratios of 21·5 and 4·30 per 1,000, which are higher than the corresponding ratios in the previous year by 4·7 and 2·20 respectively. Six of the cases were at Up Park Camp, all of which were, it is believed, contracted in Kingston; three cases were at Newcastle, but two of these were also probably contracted elsewhere; the tenth case occurred at Port Royal, cause not discovered.

Other Continued Fevers caused 137 admissions, equal to a ratio of 125·0 per 1,000, which is higher than the similar rate in the preceding year by 35·0, and above the average rate of five years by 16·7. Of the cases, 93, or 147·4 per 1,000 occurred in the Barbados Command, and 44, or 94·6 per 1,000 in Jamaica.

Yellow Fever.—There was an outbreak of yellow fever at Port Royal, Jamaica, and carried from thence up to Newcastle; the number of cases was 6, of which 4 terminated fatally. On the 10th and 11th November two men of the artillery stationed at Port Royal were attacked with this disease, and both cases proved fatal. All the troops that could be moved was sent up to Newcastle, where they were kept strictly isolated on Farm Ridge, but on the evening of their arrival, the 16th, two gunners reported themselves sick with yellow fever, and both eventually died. On the 21st a gunner, left behind at Port Royal, was attacked, and subsequently recovered. On 24th December the sixth case occurred in a man of a party who had returned from Newcastle to Port Royal for special duty, but this man also recovered. This party was immediately isolated at Apostles Battery, and no further case occurred during the year. Outside the garrison of Port Royal, two cases of yellow fever occurred at the Naval Hospital, one of which was fatal, but there were no other cases either among the dockyard employes or the civil population of the town.

Dysentery.—There were 10 admissions and 2 deaths, 5 cases in the Jamaica Command, and 5 cases, two fatal, in Barbados. The admission ratio, 9·1 per 1,000, was less than that in the preceding year by 2·4, but above the average rate of five years by ·8. The death rate, 1·82 per 1,000, is higher in both comparisons by ·86 and 1·27 respectively.

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Malarial Fevers.—122 admissions and 3 deaths are returned, being in the ratios of 111·3 and 2·74 per 1,000, which are in excess of the corresponding ratios in the preceding year by 90·2 and 2·74, and above the quinquennial average ratios by 80·4 and 1·82 respectively. In the Barbados Command there were 107 admissions, equal to 169·6 per 1,000, which, however, is a good deal higher than the previous year's rate. In Barbados itself there were only 4 cases of ague, and 1 of remittent fever, while in St. Lucia there were 78 cases of ague, and 24 of remittent fever, three of which were fatal. It is stated that most of the cases were apparently contracted at Vigie, and that more cases occurred during the first three months of the year than at other times. Of the cases in Jamaica, 8 of ague and 7 of remittent fever; there were three of the latter at Up Park Camp, and all the remainder at Port Royal. *West Indies.*

Venereal Diseases.—There were 58 admissions for *primary syphilis*, being in the ratio of 52·9 per 1,000, which is lower than the corresponding rate in the previous year by 8·4, but higher than the average rate of five years by 14·5. The ratio constantly sick was 5·23 per 1,000, an increase of ·43 on the last year's rate, and one of 2·22 on the average rate. In the Barbados Command alone the admission and constantly sick rates were 53·9 and 4·64 per 1,000, above the previous year's rates by 43·3 and 3·79 respectively. In the Jamaica Command these ratios were 51·6 and 6·02, lower by 70·2 and 3·50 than in 1890. Including simple venereal ulcer, the admission ratio for primary venereal sores in the West Indies was 186·1, and the constantly sick rate 15·53 per 1,000, which are higher than the rates in the preceding year by 17·6 and 2·73, and than the average ratios of five years by 60·2 and 6·10 respectively. In Barbados the admission ratio was 271·0, and the constantly sick rate 21·38 per 1,000, higher than in the previous year by 80·9 and 6·80 respectively. In the Jamaica Command primary venereal sores caused an admission rate of 71·0, and a constantly sick rate of 7·59 per 1,000, the former being about half the corresponding rate in the previous year, and the latter lower by 3·11. *Secondary syphilis* caused 53 admissions and 1 death. The admission rate was 48·4, and the constantly sick rate 4·21 per 1,000, which are above the previous year's rates by 10·1 and ·06, and above the quinquennial average rates by 18·3 and 1·11 respectively. In Barbados the admission and constantly sick rates were 49·1 and 4·50 per 1,000, as compared with 26·4 and 3·22 in the preceding year. In Jamaica the admission rate, 47·3 per 1,000, shows a decrease of 5·2, and the constantly sick rate 3·81, a decrease of 1·44 from the corresponding rate in 1890. *Gonorrhœa* was the cause of 196 admissions, the ratio being 178·8 per 1,000 above the last year's rate by 30·3, and above the average rate by 39·4; the ratio constantly sick was 13·95 per 1,000, an increase of 3·37 and 4·84 respectively in these comparisons. In Barbados gonorrhœa caused admission and constantly sick rates of 237·7 and 18·89 per 1,000, greater than in the previous year by 30·0 and 3·47 respectively. In Jamaica, also, the admission and constantly sick rates, 98·9 and 7·25 per 1,000, show increase, the former by 21·2, and the latter by 2·44. The total admission ratio for all forms of venereal disease in the West Indies was 413·3 per 1,000, higher than in the preceding year by 58·0, and than the average rate of five years by 117·9. The total amount of constant inefficiency on account of these diseases was 33·69 per 1,000, above the rate in 1890 by 6·16, and above the average rate by 12·05. In Barbados the total admission rate was as much as 557·8, and the total constantly sick rate, 44·77 per 1,000, the increase on the previous year's rates being 133·6 and 11·55 respectively. In the Jamaica Command, on the contrary, the admission and constantly sick rates, 217·2 and 18·65 per 1,000, have declined by 55·8 and 2·11 respectively.

Under the head of *alcoholism*, one admission is returned as compared with 3 in the previous year.

Debility caused 12 admissions, or 10·9 per 1,000, a decline of 5·4 from the last year's rate, and below the average rate.

Rheumatism.—38 admissions are returned, equal to 34·7 per 1000, rather below the average rate, and below the previous year's rate by 7·5. 10 of the admissions occurred at Jamaica and the remainder at Barbados. No case of rheumatic fever occurred.

There was one admission for *tubercular disease*, six for anæmia, and four for non-malignant new growth.

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West Indies.

LOCAL DISEASES.—*Diseases of the Nervous System* caused 17 admissions, equal to a ratio of 15·5 per 1,000, a decline of 5·6 from the last years' rate but above the average rate of five years by 2·0. Of the admissions 14, including two for mental diseases, occurred at Barbados, while at Jamaica there were only 3 admissions.

Diseases of the Eye were the cause of 12 admissions, equal to 10·9 per 1,000, below the previous year's rate by 11·1, and below the average rate by 4·6. Only two of the cases occurred at Jamaica, all the rest being at Barbados. The principal cause of admission was conjunctivitis.

Diseases of the Ear gave an admission rate of 23·7 per 1,000, above the last year's rate by 11·2, and above the average by 4·1. Of the 26 admissions 7 were at Jamaica and the rest at Barbados.

Diseases of the Circulatory System.—10 admissions are returned, or 9·1 per 1,000, only half the previous year's rate and below the average by 3·5. Palpitation caused most of the admissions.

Diseases of the Respiratory System caused 44 admissions and 2 deaths. The admission rate, 40·2 per 1,000, was above that in the previous year by 11·5, and above the average rate by 7·9. As many as 37 of the admissions were caused by bronchial affections; the remainder were 4 for asthma and one for laryngitis, pleurisy, and empyema respectively, the two last-named being fatal.

Diseases of the Digestive System gave 167 admissions, being in the ratio of 152·4 per 1,000, an increase of 36·5 on the last year's rate, and of 44·5 on the average rate. The ratio in the Barbados Command was 201·3, and that in the Jamaica Command 86·0 per 1,000, as compared with 142·6 and 84·0 respectively in the previous year. The principal causes of admission were affections of the mouth and throat 38 cases, dyspepsia 45, and diarrhœa 38 cases, of the last-named only 1 occurred in Jamaica.

Diseases of the Lymphatic and Glandular System.—40 admissions are returned, or 36·5 per 1,000, a decrease of 3·7 from the previous year's rate and of 5·3 from the average.

Diseases of the Generative System gave a ratio of admission of 147·8 per 1,000, higher than in 1890 by 20·4, and above the average by 40·2. Of 162 admissions 146 were for simple venereal ulcer, only 9 of which occurred in Jamaica.

Diseases of the Organs of Locomotion caused 6 admissions, or 5·5 per 1,000, a lower rate than in the previous year. *Diseases of the connective tissue*, with a ratio of 38·3 per 1,000, also show a decline. *Diseases of the skin* caused 64 admissions, or 58·4 per 1,000, below the average by 29·4, but only slightly below the last year's rate.

Injuries.—There were 137 admissions, equal to 125·0 per 1,000, a decrease of 49·3 from the last year's rate, and one of 37·1 from the average rate. The admissions were of ordinary character, and there were only 3 for fracture.

Invaliding.—The number of men invalided home from the West Indies was 20, being in the ratio of 18·25 per 1,000, which is lower than the corresponding rate in the previous year by 10·48 and than the average rate of ten years by 4·91. In the Barbados Command alone the invaliding rate was 20·60 per 1,000, an increase of 6·52 on the previous year's rate; and in the Jamaica Command alone the rate was 15·05, a decline of 31·17. Of the men invalided 11 belonged to the 2nd Battalion York and Lancaster Regiment, 2 to the 2nd Battalion West Riding Regiment, 6 to the Artillery, and 1 to the Engineers. With regard to age, 12, or 26·14 per 1,000, were between 20 and 25 years of age, 6, or 12·99 per 1,000, between 25 and 30 years of age, and 2, or 16·81 per 1,000, were over 30 years of age. As to service in the Command, 2, or 2·99 per 1,000, were in their first year, 8, or 35·71 per 1,000, in their third year, and 10, or 714·29 per 1,000, were over three years' service in the Command. The causes of invaliding were debility 4 cases, venereal affections 5, diseases of the nervous system 3, remittent fever 2, hernia 2, ophthalmic disease, rheumatism, and inflammation of glands one case respectively.

The number of men finally discharged by invaliding during the year was 10, equal to 9·12 per 1,000, lower by 17·70 than the previous year's rate, and by 5·40 than the average rate. The number of men finally discharged by

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invaliding from the Barbados Command was 5, equal to 7·92 per 1,000, a decrease of 2·64, and the number from the Jamaica Command was equal to 10·75 per 1,000, a decrease of 35·47. The principal disabilities necessitating discharge were diseases of the nervous system, 3 cases, and diseases of the circulatory system 2 cases.

Officers.—The average strength was 119, of which 55 were stationed at Barbados and 64 at Jamaica. The number of cases of sickness among the former was 43 and among the latter 51, a total of 94, giving a ratio of sickness of 789·9 per 1,000, an increase of 195·1 on the corresponding rate in the previous year. The principal causes of sickness were simple continued fever, 37 cases, and malarial fevers 20 cases. One death occurred from remittent fever. Five officers were invalided, two for debility, and one for ague, enteric fever, and sprain respectively.

Women.—The average strength was 103, 52 being in the Barbados Command and 51 at Jamaica. The cases of sickness were 52 at Barbados and 37 at Jamaica, a total of 89, which gives a ratio of sickness equal to 864·1 per 1,000, an increase of 319·7 on the last year's rate. Among the cases treated were 15 of simple continued fever, 11 of debility, and 5 of malarial fevers. There was a fatal case of enteric fever.

Children.—The average strength at Barbados was 92 and at Jamaica 86, making a total of 178. The number of cases of illness at Barbados was 90 and at Jamaica 64. The total ratio of sickness, therefore, was 865·2 per 1,000, an increase of 412·5. There were 9 deaths (8 at Barbados), giving a rate of mortality of 50·56 per 1,000, a decline of 3·49. Among the cases treated were 31 of simple continued fever, 8 of malarial fever, and 35 of diarrhœa. The causes of death were debility 2 cases, diarrhœa 2, inflammation of intestines 2, and hepatic disease, simple continued fever, and dysentery one case respectively.

Sanitary Conditions.—The Senior Medical Officer of the Barbados Command, Brigade Surgeon Lieut.-Colonel J. W. Maxham, M.D., states that the health of the troops was good, and the accommodation for the troops was generally satisfactory. At St. Lucia, huts were provided for the troops at the Vigie and La Toc. Malarial fevers were very prevalent at these places. The ventilation of barracks generally is reported to have been satisfactory, and the water supply good and sufficient. Among the improvements effected during the year were the following:—At St. Lucia old barracks reconstructed with the addition of the necessary subsidiary buildings, viz., on Morne Fortune, Nos. 1 and 2 Combermere blocks, as barracks, No. 3 as barrack-room and regimental offices, guard-room, &c., and No. 4 as barracks, but temporarily occupied as a hospital. A mess house with officers' quarters above it was in progress, also quarters for officers' servants. At Vigie and La Toc the verandahs to the huts were raised to the same level as the floors. Fourteen married quarters were also in progress.

At Jamaica the Senior Medical Officer, Brigade Surgeon Lieut.-Colonel R. N. Mally, reports that the barrack accommodation was very good, ample, and healthy, well constructed, well lighted, and well ventilated. At Up Park Camp the accommodation for the married families is insufficient, and has necessitated the use of large barrack-rooms as married quarters. Increased accommodation has, it is said, been sanctioned, and recommendation was made that the work should be pushed on with urgency, as it was much required. At Port Royal additional barrack accommodation was provided for 32 men in a new tropical hut, raised three or four feet off the ground by concrete pillars, which stand on a thick concrete platform laid under the hut, thus sealing the saturated subsoil under and immediately around the hut and giving a free current of air under it. At Newcastle a new experimental iron hut was tried as a barrack room. It holds 26 men in the upper story, but the lower story not being raised from the ground was used as a gymnasium only. All drinking water is now drawn from springs in the hills, and good sand and charcoal filter beds were constructed at the heads of all the main pipes leading to the barracks. Brush wood and rank vegetation has been removed from around all barracks, huts, &c., and the ground in the vicinity for some distance entirely cleared. At Port Royal, in consequence of the increase of the troops, more barracks and married quarters were in course of erection.

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West Indies.

II.—Black Troops.

The average strength of non-commissioned officers and men, exclusive of white sergeants, was 1,375, 469 being stationed in the Barbados Command and 906 in the Jamaica Command. The force in the Barbados Command consisted of the West India Fortress Company, Royal Engineers, and detachments West India Regiment. The stations occupied were Barbados, average strength 307, St. Lucia, average strength 118, and Demerara, up till the 6th May, average annual strength 44. In the Jamaica Command were the West India Submarine Mining Company, Royal Engineers, the headquarters 1st Battalion West India Regiment, and the depôt West India Regiment. The stations occupied were, in Jamaica, Up Park Camp and Port Royal, average strength 775 and 79 respectively, and, in the Bahamas, Nassau, average strength 52.

The principal statistics of sickness and mortality among the black troops in the two divisions, as well as among those serving in the West Indies as a whole, are given in the following table:—

1891.	Average Strength.	Admissions.	Deaths			Invalids	
			In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.
Barbados Command - -	469	711	3	—	3	—	25
Jamaica Command - -	906	1,168	13	—	13	—	55
West Indies - - -	1,375	1,879	16	—	16	—	80

continued.)

1891.	Average daily Sick.	Ratio per 1,000 of Strength.				
		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Average Constantly Sick.
Barbados Command - -	44·73	1516·0	6·40	—	53·30	95·37
Jamaica Command - -	67·37	1289·2	14·35	—	60·71	74·36
West Indies - - -	112·10	1366·5	11·64	—	58·18	81·52

Comparing the results for the Barbados Command with the corresponding ratios in the previous year, there is an increase of 318·9 in the admission rate, one of 3·50 in the death rate, and one of 20·59 in the ratio of constantly sick. The average sick time to each soldier was 34·81 days, and the average duration of each case of sickness 22·96 days, the former being longer than the corresponding period in the previous year by 7·52 days, and the latter by ·16 of a day.

In the Jamaica Command, compared with the results in 1890, the admission rate is increased by 42·6, and the constantly sick rate by 6·64; but there is a fractional decrease in the death rate. The average sick time to each soldier was 27·14 days, and the average duration of each case of sickness 21·05, which

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are longer than the corresponding periods in the preceding year by 2·42 days and 1·22 days respectively.

Taking all the troops in the West Indies together the admission ratio shows an increase of 135·7, the constantly sick rate, one of 11·55, and the death rate one of ·56 per 1,000. Compared with average ratios for the previous ten years the increase in admission rate was equal to 220·1 and that in the constantly sick rate to 16·63; but there is a decline of 2·50 in the death rate. The average sick time to each soldier was 29·76 days, longer than in the previous year by 4·22, and than the average period for the preceding ten years by 6·08 days. The average duration of each case of sickness was 21·78 days, longer than in 1890 by rather over a day, and than the decennial average period by 1·15 days.

With regard to corps, it is found that at Jamaica, the headquarters 1st Battalion West India Regiment, gave an admission rate of 1244·5 and a constantly sick rate of 77·91 per 1,000. The Depôt West India Regiment gave admission and constantly sick rates of 1400·7 and 69·89 respectively. The death rate in the former was 16·97, and in the latter 11·03 per 1,000. The detachments West India Regiment in the Barbados Command gave an admission rate of 1630·0, a death rate of 5·00, and a constantly sick rate of 103·85. In Jamaica the Submarine Mining Company, Royal Engineers, gave an admission rate of 1200·0 and a constantly sick rate of 54·89 per 1,000, while these ratios in the Fortress Company, Royal Engineers, at Barbados, were 855·1 and 46·23 per 1,000 respectively.

With regard to the age of the men it is calculated that the admission rate was 2134·0 per 1,000 among men under 20 years of age, 1544·5 per 1,000, among men between 20 and 25 years of age, 1179·2, among men between 25 and 30 years of age, and 705·5 among men over 30 years of age. In the preceding year also the admission rates decreased as age advanced. As to mortality, 8 deaths, or 12·07 per 1,000, were among men between 20 and 25 years of age; 5, or 11·06 per 1,000, were among men between 25 and 30 years of age; and 3, or 18·40 per 1,000, were among men over 30 years of age. As to length of service it is found that the admission rate of men in their first year was 1451·4 per 1,000, that among men in their second year 1712·3, that among men in their third year 1115·7, and that among men over three years' service 1262·5. All these ratios are higher than the corresponding ones in the previous year, but their sequence is very similar. There were 4 deaths, equal to 10·50 per 1,000 among men in their first year of service, 3, or 10·53 per 1,000, among men in their second year, 6, or 15·42 per 1,000, among men in their third year, and 3, or 9·37 per 1,000, among men over three years' service.

The principal statistics of sickness and mortality according to the different groups and orders of diseases will be found in Abstract VIII.

General Diseases.—*Diseases dependent on Morbid Poisons.—Eruptive fevers* caused an admission rate of 26·2 per 1,000, greater than in the previous year by 5·0 and than the average rate for five years by 11·9. Of the 36 admissions 16 were for measles and the remainder for chicken or cow-pox; all the cases occurred in Jamaica. *Enteric fever* caused 2 admissions, both fatal, the same as in the previous year; one case occurred at Port Royal and the other at Up Park Camp. *Simple continued fever* was the cause of 176 admissions, equal to a ratio of 128·0 per 1,000, an increase of 11·7 over the previous year's rate, and of 15·6 over the average rate of five years. Only 14 cases occurred in the Barbados Command, the remainder, equal to 178·8 per 1,000, being in Jamaica, and two of these cases terminated fatally. Under the head of *dysentery* 19 cases are returned, the admission rate, 13·8 per 1,000, is almost identical with the average rate, but above that in the preceding year by 5·5. Of the cases 14 were at Jamaica, 3 at Barbados, and 2 at St. Lucia. The remaining admissions in this sub-group of diseases were for mumps, 5 at St. Lucia, and 1 at Jamaica.

Malarial Fevers.—220 admissions are returned, being in the ratio of 160·0 per 1,000, higher by as much as 62·1 than the rate in the previous year, and by 44·8 than the quinquennial average rate. In Jamaica the admission rate was 48·6 per 1,000, dependent on 13 cases of remittent fever and 31 of ague, one of which was fatal. In the Barbados Command the admission ratio equalled 375·3 per 1,000, considerably in excess of the previous year's rate and above the average rate. Of the 176 admissions 10 cases of ague occurred at

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West Indies. Barbados and 3 at Demerara, leaving 163 admissions for St. Lucia alone, or 1381·3 per 1,000. The cases were 1 of remittent fever, 2 of malarial cachexia, and 160 of ague.

Venereal Diseases.—There were 193 admissions for *primary syphilis*, equal to a ratio of 140·4 per 1,000, an increase of 32·4 on the previous years' rate, and of 52·9 on the average rate of five years. The constantly sick rate, 14·80 per 1,000, shows an increase of 4·80 and 6·99 respectively in these comparisons. Of the cases 25, or 53·3 per 1,000, were in the Barbados Command, and 168, or 185·4 per 1,000, in the Jamaica Command, as compared with 23·2 and 147·7 respectively in the previous year. Including simple venereal ulcer the admission ratio for primary venereal sores was equal to 221·1, and the constantly sick rate to 20·94 per 1,000, which are higher than the corresponding ratios in the preceding year by 12·4 and 1·26 and than the average ratios for five years by 11·8 and 3·32 per 1,000. In the Barbados Command alone, the admission rate was 228·1 and the constantly sick rate 23·20 per 1,000, higher than in the previous year by 7·8 and ·22. In the Jamacia Command the admission and constantly sick rates were 217·4 and 19·76 per 1,000, being higher than in 1890 by 14·2 and 1·61. The total number of admissions for *secondary syphilis* was 53, giving an admission rate of 38·5 per 1,000, which is lower by 10·5 than in the previous year and by 6·5 than the average rate of five years. The constantly sick rate, 4·17 per 1,000, is, however, higher in each of these comparisons, but only to a fractional extent. In the Barbados Command the admission and constantly sick rates for secondary syphilis were 42·6 and 4·84 per 1,000, an increase of 13·6 and 2·38 on these rates in the previous year, but in the Jamaica Command the admission and constantly sick rates 36·4 and 3·82 per 1,000 are lower by 21·9 and 1·03 per 1,000 respectively. The admissions for *gonorrhœa* numbered 502, or 219·6 per 1,000, with a constantly sick rate of 14·84; these are in excess of the corresponding rates in the previous year by 45·1 and 5·54, and than the average ratios for the previous five years by 55·0 and 5·94 respectively. In the Barbados Command the admission and constantly sick rates for gonorrhœa were 187·6 and 17·89 per 1,000 as compared with 127·5 and 8·17 respectively in the previous year, and in the Jamaica Command these rates were 236·2 and 13·27 per 1,000, as compared with 196·5 and 9·82 in 1890. Taking all forms of venereal disease in the West Indies together the admission ratio was as much as 479·2 per 1,000, an increase of 47·0 and of 60·3 on the corresponding rate in the previous year and on the average rate. The ratio of constant inefficiency for these diseases was 39·95 per 1,000 above the last year's rate by 6·88 and above the average rate by 9·88. In the Barbados Command alone the total admission and constantly sick rates for venereal diseases were 458·4 and 45·93 per 1,000 in excess of the corresponding rates in the previous year by 81·6 and 12·32 respectively. In the Jamaica Command the total ratio of admission was 490·0 per 1,000, an increase of 32·1 on the last year's rate, and the total ratio of constant inefficiency on account of these diseases was 36·85 per 1,000, an increase of 4·03.

Debility.—16 admissions are returned, equal to 11·6 per 1,000, above the average rate as well as above the last year's rate.

Rheumatism was the cause of 68 admissions, equal to a ratio of 49·5 per 1,000, a decline of 17·0 from the previous year's rate, and one of 21·5 from the average rate. The admission rate in the Barbados Command was 46·9, and in the Jamaica 50·8 per 1,000. Among the cases treated there was one of rheumatic fever.

Tubercular Diseases.—There were 15 admissions and 3 deaths. The admission rate, 10·9 per 1,000, is about the same as in the previous year. All the admissions were for lung affections; 6, with two deaths in the Barbados Command, and 9, with one death, in Jamaica. There were 10 admissions for other diseases of this group. The cases were six of scrofula, two of non-malignant new growth, one of anæmia, and one of elephantiasis; the last-named occurred at Jamaica.

Local Diseases.—*Diseases of the Nervous System.*—There were 22 admissions, or 16·0 per 1,000, an increase on the last year's rate by 6·8, and on the average rate by 2·4. Of the cases treated 5 were mental affections; there were also 8 of neuralgia, 5 of epilepsy, and 4 of paralysis.

Diseases of the Eye caused an admission ratio of 22·6 per 1,000, a decline of 18·0 from the rate in the preceding year, and of 7·4 from the average

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rate, Of 31 admissions, 22 were for conjunctivitis. *Diseases of the ear* caused 5 admissions, as compared with 6 in the preceding year.

Diseases of the Circulatory System.—12 admissions are returned, equal to 8·7 per 1,000, below the last year's rate by 5·2, and below the average rate by 8·0. Half the admissions were for palpitation and half for valve disease. There was one death from aneurysm of the aorta.

Diseases of the Respiratory System caused 64 admissions and 4 deaths. The admission rate, 46·6 per 1,000, is slightly below the previous year's rate, and also below the average. The cases included 34 of bronchial affection, 22 of pneumonia, 6 of pleurisy, and 2 of pneumonic phthisis. There were 3 deaths at Jamaica and 1 at Barbados, all from pneumonia.

Diseases of the Digestive System.—There were 96 admissions, being in the ratio of 69·8 per 1,000, an increase of 14·4 on the last year's rate, but rather below the average. The admission rate in the Barbados Command was 127·9, and in the Jamaica Command 39·7 per 1.000. The principal causes of admission were mouth and throat affections, 29 cases, diarrhœa 30, and dyspepsia 13 cases. There was 1 death from peritonitis.

Diseases of the Lymphatic and Glandular System were the cause of 85 admissions, or 61·8 per 1,000, an increase both on the last year's rate and on the average rate. *Diseases of the urinary system* caused 5 admissions, as compared with 2 in the previous year. The cases were 2 of Bright's disease, one fatal, and one of nephritis cystitis and hæmaturia respectively.

Diseases of the generative system caused an admission rate of 101·8 per 1,000, a decline of 14·5 from the previous year's rate, and of 45 2 from the quinquennial average rate. 111 of the admissions were for simple venereal ulcer, and among the remainder were 13 of orchitis and 10 of urethral stricture. *Diseases of the organs of locomotion* gave 17 admissions, or 12·4 per 1,000, an increase of 6·9 on the last year's rate. Synovitis was the chief cause of admission. *Diseases of the connective tissue* were more frequent than in the preceding year, the admission rate showing an increase of 5·5. *Diseases of the skin* caused 81 admissions, or 58·9 per 1,000, a decline of 32·5 from the last year's rate, and also below the average rate.

Injuries.—132 admissions are recorded and 1 death. The ratio of admission was 96·0 per 1,000, an increase of 12·9 on the rate in 1890. In the Barbados Command the ratio was 110·9, and in the Jamaica Command 88·3 per 1,000. The admissions were principally for contusions, wounds, and sprains. The fatal case was one of accidental drowning, and occurred at Jamaica.

Invaliding.—The number of men discharged during the year as medically unfit for further service was 80, being in the ratio of 58·18 per 1,000, which is higher than the corresponding rate in the previous year by 15·71, and above the decennial average rate by 14·95. In the Barbados Command the number of men invalided was 25, or 53·30 per 1,000, an increase of 35·91, and in the Jamaica Command the number was 55, or 60·71 per 1,000, an increase of 6·57. With regard to age, 4 men, or 41·24 per 1,000, were under 20 years of age, 37 men, or 55·81 per 1,000, were between 20 and 25 years of age, 30, or 66·37 per 1,000, were between 25 and 30 years, and 9, or 55·21 per 1,000, were over 30 years of age. As to service, 33 men, or 86·61 per 1,000, were invalided in their first year of service, 12, or 42·10 per 1,000, in their second year, 20, or 51·41 per 1,000 in their third year, and 15, or 46·87 per 1,000, had over three years' service. The principal disabilities necessitating discharge were constitutional syphilis 12 cases, tubercle 12, nervous diseases 11, including five of mental disease, debility 8, scrofula 6, &c.

Women and Children.—The average strength of women was 61, and there was 14 cases of sickness, chiefly simple continued and malarial fevers. The average strength of children was also 61, and there were 23 cases of sickness and 5 deaths. The principal causes of admission were fevers and bronchitis. The deaths were two from convulsions and one from simple continued fever, debility, and bronchitis respectively.

Sanitary Conditions.—The Senior Medical Officer of the Barbados Command reports that the health of the black troops was good during the year. The barracks and hospital accommodation throughout the district was generally satisfactory. Huts were provided at La Toc. The water supply was good and sufficient. The drainage was satisfactory and carefully attended

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West Indies. to. The rations are the same as those issued to the white troops, they were good in quality and sufficient in quantity. The means of cooking are satisfactory, and every facility is afforded to vary the diet. The duties of the troops were of ordinary character and conducive to health. The Senior Medical Officer at Jamaica states that owing to the increase in the West India Regiment by the formation of a regimental depot at Up Park Camp increased barrack accommodation is required and is being provided for both single men and married families. These families have almost all been on the lodging list, occupying houses in the vicinity of the barracks. About 150 single men have thus been accommodated in barracks, but an excess of about 180 still remains to be provided for in the single men's barrack blocks, which were in course of completion.

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VII.—ON THE HEALTH OF THE TROOPS SERVING IN WESTERN AFRICA.

Sickness and Mortality.

I.—White Troops.

West Africa.

The white troops consisted of the officers serving in the Command, the European non-commissioned officers of the 2nd Battalion West India Regiment, and detachments Royal Artillery and Royal Engineers, the latter corps only in the dry or healthy season of the year. The average strength of non-commissioned officers and men was 37, and there were 96 admissions into hospital, equal to a ratio of 2594·6 per 1,000, an increase of 694·6 on the corresponding rate in the previous year. Exactly one half the admissions were for remittent fever, and there were in addition 9 cases of ague. Two men were invalided for remittent fever. The average strength of officers was 26, and there were 75 attacks of illness, equal to a ratio of 2884·6 per 1,000, an increase of 515·4 on the last year's rate. There was no mortality, but 10 officers were invalided during the year, being at the rate of 384·61 per 1,000, the same as in 1890. 56 of the attacks of illness were due to malarial fever, as many as 46 being of the remittent form. Six officers were invalided for malarial disease and one for debility, rheumatism, dementia, and hepatitis respectively.

II.—Black Troops.

The average strength of non-commissioned officers and men was 581; of these 523 were stationed at Sierra Leone, the remainder being temporarily detached at Cape Coast Castle, Robari, and Gambia. The troops consisted of the 2nd Battalion West India Regiment and the West African Artillery. The detachments were all from the infantry regiment, that at Cape Coast Castle being stationed there from the beginning of the year until 17th February, average annual strength 26; that at Robari from 1st January to 17th March, average annual strength 9; and that at Bathurst, Gambia, from 14th July to the end of the year, average annual strength 23.

The more important of the statistics of sickness and mortality are given in the following table:—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent to West Indies.	Finally Discharged.		Admissions.	Deaths.	Invalids sent to WestIndies.	Invalids finally Discharged.	Constantly Sick.
551	856	8	2	10	43	17	45·28	1473·3	17·21	74·01	29·26	77·93

Compared with corresponding results in the previous year a decrease of 557·4 has occurred in the ratio of admission, and one of 21·04 in that of constantly sick, but there is a fractional increase in the death rate, while in

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West Africa. comparison with similar average ratios for the preceding ten years the admission and mortality rates have decreased by 263·2 and 4·00 respectively, and the constantly sick rate has increased by 2·40. The average sick time to each soldier was 28·44 days, which is shorter than the corresponding period in the previous year by 7·68 days, but longer by a fraction of a day than the average period for the preceding ten years. The average duration of each case of sickness was 19·30 days, in excess of the similar period in the previous year by 1·51 days, and of the decennial average period by 3·43 days.

Taking the garrison of Sierra Leone by itself the admission ratio was 1325·1, and the constantly sick rate 77·42 per 1,000, which are lower than those for the year 1890 by as much as 863·0 and 31·66 respectively. The death rate, 18·79 per 1,000, however, shows an increase of 1·46.

The admissions, mortality, invaliding, &c. arranged according to the different groups and orders of diseases, are shown in Abstract IX.

GENERAL DISEASES.—*Diseases dependent on Morbid Poisons. — Eruptive fevers* were represented by a single case of scarlet fever, it occurred at Bathurst, and was contracted in the town. For *enteric fever* there was also a single admission; the case, which proved fatal, occurred at Sierra Leone. *Dysentery* was the cause of 6 admissions, equal to a ratio of 10·3 per 1,000, which is lower than that in the previous year by 3·4, and only one third of the average rate for five years. Four of the cases occurred at Sierra Leone, one at Cape Coast Castle, and one at Bathurst. The remaining admissions in the 1st sub-group of diseases were two for influenza at Bathurst, where the disease was prevalent among the civil population, and one for whooping cough at Sierra Leone.

Malarial Fevers caused 339 admissions, equal to a ratio of 583·5 per 1,000, which is lower than the corresponding rate in the preceding year by 300·3, and below the average rate of five years by 330·7 The average number constantly sick from these fevers was equal to a ratio of 12·86 per 1,000, as compared with 26·85 in the previous year, and with 22·71, the quinquennial average rate. In the Sierra Leone division alone, the ratio of admission for malarial fevers was 464·3 per 1,000, less than half the rate in 1890. Of the total number of cases 32 were returned as ague, and all the remainder as remittent fever. In the Sierra Leone district, including Robari, there were 5 cases of ague and 242 of remittent fever. The decrease in prevalence of these fevers is due to the continued residence of the infantry regiment in the station, new arrivals always suffering more than troops who have been one or two years in the Command.

Venereal Diseases.—Under the head of *primary syphilis* 30 admissions are returned, being in the ratios of 51·6 per 1,000, an increase of 3·7 on the previous year's rate, but a decrease of 5·6 from the average rate of five years. Adding the sickness for simple venereal ulcer, which caused 32 admissions, the ratio of admissions for simple venereal sores was 106·6 per 1,000, which differs from the rate in the previous year only by a decrease of 1·1 and from the average rate of five years by 4·8. *Secondary syphilis* also caused 30 admissions, or 51·6 per 1,000, which is below the ratio for the year 1890 by 18·5, but above the quinquennial average rate by 10·2. The admissions for *gonorrhœa* numbered 86 and were in the ratio of 148·0 per 1,000, slightly below the average rate but above the rate in the previous year by 13·0. Including all forms of venereal disease the admission ratio amounted to 306·2 per 1,000, which differs but little from corresponding ratio in the previous year and from the average ratio, being lower than the former by 6·6 and higher than the latter by 2·3. The total amount of constant inefficiency on account of these diseases was equal to 24·26 per 1,000, which is lower than the similar rate in 1890 by 2·30 but higher than the quinquennial average rate by 1·18.

Parasitic Diseases caused 7 admissions, mostly cases of tænia solium, as compared with 5 in the previous year.

Debility.—10 admissions are returned, or 17·2 per 1,000, as compared with 22·2 in 1890, and 29·0 the average rate.

Rheumatism was the cause of 61 admissions, equal to 105·0 per 1,000, a decline of 6·1 from the rate in the previous year, but above the average rate by 21·4. No case of rheumatic fever occurred.

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Tubercular Diseases.—3 admissions and 1 death are returned as compared with 6 admissions and 5 deaths in the previous year. Two of the admissions, including the fatal cases were due to tubercular disease of the lung. *West Africa.*

The remaining admissions in this group were two for scrofula, and one for anæmia. There was also one death from malignant disease.

Local Diseases.—*Diseases of the Nervous System.*—The admissions under this head were 8 in number, being in the ratio of 13·7 per 1,000, an increase of 5·2 on the last year's rate and of 2·3 on the average rate of five years. Among the admissions were 2 for melancholia and 1 for catalepsy.

Diseases of the Eye caused 12 admissions, or 20·7 per 1,000, less than half the similar rate in the preceding year, and below the average rate by 8·6. All the admissions but two were for conjunctivitis.

Diseases of other Organs of Special Senses.—There were 3 admissions for aural disease, and 4 for nasal affections.

Diseases of the Circulatory System.—Only two admissions are recorded, cases of palpitation, but there was one death from cardiac aneurysm, out of hospital.

Diseases of the Respiratory System.—There were 18 admissions and 3 deaths, being in the ratios of 31·0 and 5·16 per 1,000 respectively. The admission ratio shows a great reduction as compared with that in the previous year, as much as 57·9, and is only half the average rate of five years. 4 of the admissions and all the deaths were from pneumonia; bronchitis caused the remaining admissions.

Diseases of the Digestive System caused only 16 admissions, equal to 27·5 per 1,000. In this case also there is a marked decrease as compared with the previous year's rate. and with the average rate, being as much as 75·1 and 45·5 respectively. Throat affections and diarrhœa were the principal causes of admission.

Diseases of the Lymphatic and Glandular System caused an admission rate of 48·2 per 1,000, below the last year's rate by 6·5 and below the average rate by 17·4. Out of 28 admissions there were 2 for splenic disease.

Diseases of the Generative System were at the rate of 75·7 per 1,000, a decline of 13·2 from the previous year's rate, and of 7·5 from the average rate. There were 10 admissions for orchitis, 2 for hydrocele, and all the rest were for simple venereal ulcer.

Diseases of the Organs of Locomotion.—8 admissions are recorded, synovitis being the principal cause. The admission rate is almost identical with the average rate, but slightly below that in the previous year.

Diseases of the Connective Tissue with a ratio of 67·1 per 1,000 show a considerable increase in comparison with both the last year's rate and with the average rate, but *diseases of the skin* with a ratio of 94·7 per 1,000, show a marked decrease in both these comparisons 79·9 and 72·1 respectively.

Injuries were 39 in number, equal to a ratio of 67·1 per 1,000, being above the rate in the preceding year, but less than the average rate. None of the cases require special mention.

Invaliding.—The number of men invalided to the West Indies for change or discharge was 43 equal to a ratio of 74·01 per 1,000, which is higher than the corresponding rate in the previous year by 3·93 and than the average rate of the preceding ten years by 55·54. The principal causes of invaliding were debility 10 cases, constitutional syphilis 8, rheumatism 7, and diseases of the organs of locomotion 4 cases.

The number of men finally discharged the service by invaliding was 17, being at the rate of 29·26 per 1,000, an increase of 7·04 on the previous year's rate and one of 21·40 on the decennial average rate. The principal disabilities necessitating discharge were constitutional syphilis 5 cases, diseases of the organs of locomotion 4, and rheumatism 3 cases.

Women and Children.—The average strength of women was 29 and there were 43 attacks of illness, equal to a ratio of 1482·7 per 1,000, which is more than double the corresponding rate in the previous year. Malarial fevers were the principal causes of sickness, there being 20 cases of remittent fever and 5 of ague. The average strength of children was 24, and the cases of sickness were 22 in number. The rate of prevalence of sickness was therefore 916·6 per 1,000, greater than in the preceding year by 371·2. Malarial fevers were the cause of 12 of the attacks of illness. One death occurred from diarrhœa.

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West Africa.

Sanitary Conditions.—The Senior Medical Officer reports that the health of the troops still further improved during the year, the decrease in prevalence of malarial fevers having continued, due to the acclimatization of the men who were in their third year of service in the Command.

The general sanitary conditions of Sierra Leone and the other stations in the Command temporarily occupied were all satisfactory. At Sierra Leone two new blocks of barracks were erected at Tower Hill, which has considerably increased the accommodation for the troops. They are well constructed, afford sufficient cubic space, and are satisfactorily ventilated.

At King Tom peninsula a new hut was erected for the European Artillery, it is said to be well built and in every way suitable.

The station hospital at Tower Hill was considerably improved, a high wall which surrounded it has been removed and replaced by an iron railing. The entire basement with the adjoining verandah were concreted, the mortuary and all the stores in connexion with the hospital were also laid with concrete floors, and refitted. The surface drainage is in good order and is regularly attended to. The means of ablution are satisfactory and no change was effected. The cooking arrangements are satisfactory and the rations good, but the Senior Medical Officer expresses his opinion that the soldiers of the West India regiment would be more suitably fed on a dietary containing more vegetable food and less meat than at present, and he points out that their diet before enlistment consisted almost solely of vegetable food.

At Bathurst, Gambia, which is situated on a small island separated from the mainland by a narrow channel, the barracks consist of two large two-storied houses built of brick; the ground floor rooms are used for stores, and the upper floor rooms for the troops; accommodation is ample and ventilation sufficient. The great defect in the position of the station is the low elevation about the river and the consequent difficulty in drainage; there are also swamps in the neighbourhood which tend to make the place very malarious.

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VIII.—ON THE HEALTH OF THE TROOPS SERVING IN SOUTH AFRICA AND AT ST. HELENA.

Sickness and Mortality.

South Africa and St. Helena.

The average strength of the warrant officers, non-commissioned officers, and men serving in the Command during the year was 3,185, and of these 138 were stationed at St. Helena.

The force comprised the 11th Hussars, No. 4 Mountain Battery, Royal Artillery, No. 8 Company, Southern Division, Royal Artillery No. 29 Company, Royal Engineers, the 1st Battalion East Yorkshire Regiment, detachment 1st Battalion North Staffordshire Regiment, detachments Army Service Corps, Medical Staff Corps, and Ordnance Store Corps, and Garrison Staff throughout the year. There were also the 1st Battalion Royal Scots until 8th August when it left for England, and the 2nd Battalion York and Lancaster Regiment, from the 24th April, on arrival from the West Indies, until the end of the year.

At St. Helena the garrison consisted of one company of infantry and small detachments of artillery, engineers, and departmental corps.

The following table gives the more important of the statistics of sickness and mortality among the troops in South Africa and St. Helena separately, as well as those for the whole Command :—

1891.	Average Strength.	Admissions	Deaths			Invalids	
			In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.
South Africa	3,047	2,605	26	1	27	77	52
St. Helena	138	51	2	—	2	1	1
Total	3,185	2,656	28	1	29	78	53

(*continued.*)

1891.	Average daily Sick.	Ratio per 1,000 of Strength.				
		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
South Africa	179·72	854·9	8·86	25·27	17·07	58·98
St. Helena	2·79	369·6	14·49	7·25	7·25	20·22
Total	182·51	833·9	9·10	24·49	16·63	57·30

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South Africa and St. Helena.

Compared with corresponding results in the previous year an increase of 48·1 per 1,000 has occurred in the ratio of admission, one of ·66 in that of mortality, and one of 6·70 in that of constantly sick, and compared with similar average ratios for the preceding ten years there is an increase of 56·2 in admission rate and one of 5·42 in the rate of constant inefficiency through sickness; but the death rate shows a decline of 6·59. The average sick time to each soldier was 20·92 days, longer than the corresponding period in the previous year by 2·45 days, and than the similar average period for the preceding ten years by 1·99 days. The average duration of each case of sickness was 25·08 days, longer than in the previous year by 1·58 days, and than the decennial average period by ·73 of a day.

For South Africa the admission ratio shows an increase of 54·3 as compared with the preceding year, and the constantly sick rate one of 6·96, but there is no change in the death rate. In St. Helena the admission rate has declined by 115·9 and the constantly sick rate by 1·45. The death rate was 14·49 per 1,000 as compared with *nil* in the previous year.

The principal statistics of sickness and mortality in the different arms of the service, and in the several corps which served in the Command during the year will be found in Abstract XL. It will be observed that among the arms of the service, the highest admission ratio, 1062·6 per 1,000, was in the Cavalry, the next, 863·6, in the Artillery, followed by 820·7 in the Infantry, 493·1 in the Engineers, and 371·4 in departmental corps. Mortality was highest, 20·20 per 1,000, in the artillery, and *nil* in departmental corps. Constant inefficiency through sickness was greatest in the Cavalry, 83·81, and least in the departments, 23·66 per 1,000. Taking individual corps, and excluding those whose average annual strength was less than 100 men, the highest ratios of admission, mortality, and constantly sick, were 1197·7, 34·88, and 84·53 per 1,000 respectively in No. 4 Mountain Battery, Royal Artillery, the next being 1062·6, 18·97, and 83·81 per 1,000 respectively in the 11th Hussars; both these corps were quartered at Pietermaritzburg for nine months, during the prevalence of an epidemic of enteric fever, and at Howick for three months; the lowest admission rate was 661·7 per 1,000 in No. 8 Company, Southern Division, Royal Artillery, stationed at Cape Town, with a detachment at Simonstown; the lowest mortality rate was *nil* in the detachment 1st Battalion North Staffordshire Regiment at Cape Town, and the lowest annual rate of constantly sick, 40·16 per 1,000 in the 2nd Battalion York and Lancaster Regiment at Pietermaritzburg for eight months, with detachments at St. Helena for nine months, Etshowe for seven months, and N'Kandhla for three months.

With regard to the influence of age and length of service in the Command on sickness and mortality among the troops, it is calculated that the admission ratio among men under 20 years of age was 719·0 per 1,000, that among men between 20 and 25 years of age 923·8, that among men between 25 and 30 years 883·2, that among men in the next quinquennium 468·0, and that among men over 35 years of age 168·0 per 1,000. In the preceding year also the highest admission rate was at the same period of age, and the sequence of ratios was similar throughout, but the individual rates were all higher than the corresponding ones in the year under report, except that among men between 25 and 30 years, in which there was a decrease, and that among men of over 35 years of age, in which no change occurred. The mortality rate among men under 20 years of age was 13·07 per 1,000, that among men between 20 and 25 years of age 9·27, and those among men in the next two quinquennia 8·72 and 8·00 respectively, after which no mortality occurred. In the preceding year the sequence of ratios was exactly reversed, as there was no mortality among men under 20 years of age, and the death rate then steadily increased through the several periods of age until it reached its highest among men over 35 years of age. As to service in the Command the admission ratio was 810·2 per 1,000, among men in their first year, 875·3 among men in their second year, 894·2 among men in their third year, 673·1 among men in their fourth year, and 852·5 among men over four years' service. In the preceding year the admission rate was far the highest among men in their first year of service, and fell considerably among men in their second and third years, rising only slightly among men in their fourth year of service in the Command. Mortality was highest among men under one year in the Command, the ratio being 15·89 per 1,000, among men in their second year of service the ratio

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was 4·16, among men in their third year it was 2·32, among men in their fourth year it was *nil*, and among men over four years' service it was 14·75 per 1,000. There was no similarity in the sequence of these ratios as compared with those in the preceding year as in that year there was not a single death among men in their first year of service, nor among men in their third year; the highest rate was among men over four years' service.

The statistics of sickness and mortality among the troops arranged according to the different groups and orders of diseases, are shown in Abstract X.

GENERAL DISEASES.—*Diseases dependent on Morbid Poisons.*—Under the head of *eruptive fevers* 7 admissions are returned, equal to a ratio of 2·2 per 1,000. The cases were two of scarlet fever, one of measles, and four of dengue.

Enteric Fever was the cause of 78 admissions and 17 deaths, being in the ratios of 24·5 and 5·34 per 1,000 respectively. These ratios are higher than the corresponding rates in the previous year by 9·3 and 3·65, and than the similar average ratios for the preceding five years by 19·7 and 4·20 respectively. The per-centage of mortality to attack was 21·8 as compared with 23·5 the average for five years, and 11·1 the rate in the preceding year. Of the admissions 63 occurred in Natal, 14 in Cape Colony, and 1 in Zululand. 59 of the cases in Natal occurred at Pietermaritzburg, and 4 at Howick, a camp about 14 miles distant. The great majority of these cases occurred during the continuance of the epidemic which commenced in December of the previous year, and continued until April of the year under report. As many as 42 of the cases occurred in the 11th Hussars, and among the remainder were 8 in the artillery and 6 in the Medical Staff Corps. Owing to the severity of the epidemic at Pietermaritzburg, the camp at Howick was formed on the 16th January, it was situated on a spur of ground with good natural surface drainage owing to its sloping configuration. An ample supply of good drinking water was obtained from the River Umgeni close to the camp, and every precaution taken to preserve the ground in perfect sanitary condition. A few men transferred from Howick on account of enteric fever shortly after their arrival, doubtless contracted the disease in Pietermaritzburg prior to leaving for camp, and several men transferred for febrile attacks within the first three weeks, whose cases were afterwards diagnosed as enteric fever, also most probably contracted their disease before going to camp; there were several others transferred later than this, who, from the uncertainty of the duration of the period of incubation, probably contracted the disease in Pietermaritzburg. The average age of the men attacked is stated to have been 23·2 years, and the average time in South Africa a little over nine months. The Senior Medical Officer, Natal, remarks that the climatic influences at a certain season of the year acting on young unacclimatised men, seem to favour the development of the disease among them. He adds that as regards the local insanitary condition at Pietermaritzburg there is but little to add to the remarks in his report in the previous year, except that several improvements have since been made. Of the cases of enteric fever in Cape Colony 11 occurred in Cape Town, all of which were mild and made good recoveries, 2 were at Wynberg, these also terminated favourably, and 1 at Simonstown, a very mild case.

Simple Continued Fever was the cause of 219 admissions, the ratio being 68·7 per 1,000, an increase of 31·5 on the corresponding rate in the previous year, and of 39·8 on the average rate for the previous five years. Of the admissions 159, or 131·6 per 1,000, occurred in Natal, 83 being at Pietermaritzburg, and 76 at Howick, 41 cases, or 144·8 per 1,000 at Etshowe, Zululand, and 18 cases, or 13·1 per 1,000 in Cape Colony, 10 being at Wynberg, and 8 at Cape Town. At Etshowe the high rate of admission for simple continued fever was attributed to exposure on the march; 22 cases having been admitted from this cause on the arrival of a detachment from Pietermaritzburg.

Dysentery.—7 admissions are returned equal to a ratio of 2·2 per 1,000, a decline of as much as 6·2 from the previous year's rate, and of 5·3 from the average rate of five years. The cases were scattered over different stations, 3 being at Pietermaritzburg, 2 at Wynberg, 1 at Simonstown, and 1 at Howick.

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South Africa and St. Helena.

The remaining admissions in this sub-group of diseases were 3 of influenza at St. Helena, 2 of mumps, and 1 of whooping cough.

Malarial Fevers were the cause of 40 admissions, equal to a ratio of 12·6 per 1,000, which is below the last year's rate by 3·6, and above the quinquennial average rate also by 3·6. Of the admissions 37 were at Cape Town, and occurred amongst men who had a short time previously served in Mauritius, where the disease was doubtless contracted.

Septic Diseases was represented by a single case of erysipelas.

Venereal Diseases.—The admissions for *primary syphilis* were 201 in number equal to a ratio of 63·1 per 1,000, a decline of 11·5 from the rate in the previous year, and below the average rate of five years by 39·7. Of the cases 146 were in Cape Colony, 45 in Natal, 8 in Mafeking, 1 in Zululand, and 1 at St. Helena. Including the sickness from simple venereal ulcer the admission ratio for primary venereal sores was 75·3 per 1,000, which is lower than in the preceding year by 12·2 and below the five years' average rate by 61·2. The number of admissions for simple venereal ulcer was 39, and the number constantly sick 3·23. *Secondary syphilis* caused 141 admissions and 3 deaths, including that of an invalid. The admission ratio, 44·3 per 1,000, is lower by 5·7 than in the preceding year, and by 16·3 than the quinquennial average rate. Of the cases 72 occurred in Natal, 48 in Cape Colony, 8 in Zululand, 8 at Mafeking, and 5 at St. Helena. *Gonorrhœa* with 229 admissions caused a ratio of 71·9 per 1,000, which is greater than the corresponding rate in the previous year by 5·0, but lower than the average rate by 24·3. 176 of the cases occurred in Cape Colony, 38 in Natal, 8 at Mafeking, 4 at St. Helena, and 3 in Zululand. Including all forms of venereal disease the total admission ratio was 191·5 per 1,000, which is lower than in the previous year by 12·9, and than the average rate of five years by as much as 101·8. The total amount of constant inefficiency was equal to 14·96 per 1,000, which is below the previous year's rate by 1·33, and below the average rate by 4·72. In Cape Colony alone the admission ratio was 288·5, and the constantly sick rate 21·58 per 1,000 as compared with 266·6 and 20·80 respectively in the previous year. Though these ratios show a little increase in each instance, yet these as well as those in the previous year are considerably lower than those in the year 1888, at the end of which year a Contagious Diseases Ordinance was introduced. In Natal and Zululand taken together the total admission ratio was 118·7 per 1,000, and the total rate of constant inefficiency on account of these diseases was 10·54 per 1,000 as compared with 144·3 and 12·25 respectively, the corresponding ratios in the preceding year.

Parasitic Diseases caused 11 admissions, all for tænia solium, as compared with 4 in the previous year.

Alcoholism.—Admissions on this account were less frequent than in the preceding year, there having been only 6 against 20 in 1890.

In Group C. there were 37 admissions for *debility*, and 5 for malformations. The ratio of admissions, 13·2 per 1,000, is below that in the previous year by 3·0 and the average rate by 2·9.

Rheumatism caused 109 admissions, equal to a ratio of 34·2 per 1,000, a decline of 5·0 from the last year's rate and of 11·7 from the average rate. In Natal there were 53 cases, including 2 of rheumatic fever, and in Cape Colony 33 cases, including 3 of rheumatic fever.

Tubercular Diseases.—16 admissions and 1 death are recorded. The ratio of admission, 5·0 per 1,000, is higher than that in the previous year by 3·3 and than the average rate by 2·4. Of the cases 15, including that which terminated fatally, were of lung affections.

The remaining admissions in this group of diseases comprised 8 of non-malignant new growth, 5 of scrofula, and 3 of anæmia.

Local Diseases.—*Diseases of the nervous system* caused 41 admissions, equal to a ratio of 12·9 per 1,000, which is higher than the corresponding rate in the previous year by 4·4 and than the average rate of five years by 4·3. The principal causes of admission were neuralgia 14 cases, epilepsy 9, paralysis 7, and mental disease 5 cases. Two deaths occurred, one from inflammation of the membranes of the brain and the other from paralysis.

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Diseases of the Eye were the cause of 40 admissions, equal to a ratio of 12·6 per 1,000, a decline of 5·0 from the corresponding rate in 1890 and one of 5·7 from the average rate. Nearly half the admissions were due to conjunctivitis. *South Africa and St. Helena.*

Diseases of other Organs of Special Senses.—31 admissions are returned, being in the rate of 9·7 per 1,000, an increase of 5·0 on the last year's rate and of 4·4 on the average ratio. With the exception of two cases of nasal affection, all the admissions were for aural disease.

Diseases of the Circulatory System caused 40 admissions, equal to a ratio of 12·6 per 1,000, which is lower by 2·6 than the previous year's rate but fractionally higher than the average rate. The cases comprised 19 of palpitation, 13 of affections of veins, 5 of valve disease of heart, 2 of pericarditis, and 1 of angina pectoris.

Diseases of the Respiratory System.—75 admissions are returned, being in the ratio of 23·5 per 1,000, fractionally above the average rate but below the previous year's rate by 11·6. The principal causes of admission were bronchial affections 56 cases, and among the remainder were 7 of pneumonia and 4 of pleurisy.

Diseases of the Digestive System were the cause of 332 admissions, being equal to a ratio of 104·2 per 1,000, which shows an increase of 13·0 on the last year's rate, and one of 24·7 on the quinquennial average rate. Half the admissions were caused by affections of the mouth and throat, and among the remainder were 54 cases of diarrhœa, 43 of dyspepsia, 24 of hæmorrhoids, and 15 of hepatic disease.

Diseases of the Lymphatic and Glandular System with 68 admissions caused a ratio of 21·4 per 1,000, which, though almost the same as that in the previous year, is but little more than half the average rate for five years.

Diseases of the Urinary System caused 6 admissions, equal to 1·9 per 1,000, a good deal below the average, as well as below last year's rate by ·8.

Diseases of the Generative System caused an admission rate of 29·8 per 1,000, as compared with 35·1 in the previous year and with an average rate of 53·7, but of 95 admissions 39 were cases of simple venereal ulcer and 35 were orchitis.

Diseases of the Organs of Locomotion.—37 admissions are recorded, of which 18 were cases of synovitis. The admission rate, 11·6 per 1,000, shows an increase of 4·2 on the rate in 1890 and one of 4·9 on the average rate.

Diseases of the Connective Tissue with 94 admissions gave a ratio of 29·5 per 1,000, slightly above the late year's rate and the average rate.

Diseases of the Skin caused 243 admissions, equal to a ratio of 76·3 per 1,000, which is higher by 10·4 than the rate in the previous year, and by 20·6 than the average rate of five years. The principal causes of admission were ulcers, boils, whitlows, and eczema.

Poisons.—3 admissions are returned, one from alcohol and two from eating poisonous fungus.

Injuries.—417 admissions and 6 deaths are recorded. The admission rate, 130·9 per 1,000, is higher by 25·2 than in 1890 and by 33·3 than the average rate. There were 3 admissions under general injury, two for sunstroke, and one for multiple injury, and 4 deaths, two from accidental drowning, and two from multiple injury, one due to a fall over a cliff at Howick and the other to a fall down Ladder Hill at St. Helena. With regard to local injuries the principal causes of admission were contusions, wounds, and sprains. There were two deaths, one from contusion of spine and the other from fracture of the skull.

Invaliding.—The number of men invalided home during the year was 78, being in the ratio of 24·49 per 1,000, which is lower than the corresponding rate in the previous year by 11·98 and than the average rate for the preceding ten years by 17·64. In the Cavalry the invaliding ratio was 34·16 per 1,000, in the Artillery 22·73, and in the Infantry 24·33, all being below the corresponding rates in 1890. Of individual corps having a strength over 100 men the 1st Battalion North Staffordshire Regiment gave the highest annual admission rate, 51·87 per 1,000, and the 2nd Battalion York and Lancaster Regiment, the lowest 5·47 per 1,000. According to age it is observed that 2 men, or 13·07 per 1,000, were under 20 years; 34 men, or 22·52 per 1,000, were between 20 and 25 years of age; 33, or 28·77 per 1,000, were between 25 and

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South Africa and St. Helena.

30 years of age; 7 men, or 28·00, were between 30 and 35 years of age; and 2 men, or 16·00 per 1,000, were over that age. With the exception of the first all these are lower than the corresponding ratios in the previous year. With regard to length of service in the Command, 22 men, or 18·39 per 1,000, were in their first year; 12 men, or 29·95 per 1,000, were in their second year; 25 men, or 29·07 per 1,000, were in their third year; 3 men, or 9·71 per 1,000, were in their fourth year; and 16 men, or 47·20 per 1,000, were over that service. The principal causes of invaliding were diseases of the circulatory system 15 cases, or 4·71 per 1,000; debility 13 cases, or 4·08 per 1,000; nervous affections 9 cases, or 2·83 per 1,000; tubercular disease 7 cases, or 2·20 per 1,000; and secondary syphilis, rheumatism, and digestive disorders 5 cases, or 1·57 per 1,000, each.

The number of men finally discharged by invaliding was 53, equal to a ratio of 16·63 per 1,000, a decline of 6·34 from the previous year's rate and below the decennial average rate by 4·12. The principal disabilities necessitating final discharge by invaliding were diseases of the nervous system, 11 cases, or 3·45 per 1,000; diseases of the circulatory system 10 cases, or 3·14 per 1,000; tubercular diseases 7 cases, or 2·20 per 1,000; and debility 5 cases, or 1·57 per 1,000.

Officers.—The average strength was 148, and there were 70 attacks of illness, equal to a ratio of 473·0 per 1,000, which is higher than that in the previous year by 14·7. The principal causes of sickness were fevers, (including three cases of enteric fever) and injuries. Three officers were invalided, two after attacks of fever and one for debility.

Women.—The average strength was 215, and the ratio of prevalence of sickness, 316·3 per 1,000, an increase of 71·5 on the last year's rate. The principal causes of sickness were fevers and diseases of the generative system. One death occurred from puerperal septicæmia.

Children.—The average strength is returned as 396, and there were 123 attacks of illness and 12 deaths. The ratio of prevalence of sickness was 310·6, and that of mortality 30·30 per 1,000, which are below the corresponding rates in the previous year by 191·4 and 11·33 per 1,000 respectively. Among the cases treated were 31 of eruptive fevers, including one case of scarlet fever and 16 of measles, 2 of enteric fever, 26 of bronchial affections, and 11 of diarrhœa. The deaths were 3 from measles, 4 from diarrhœa, and one from whooping cough, debility, meningitis, gastritis, and malformation of intestine respectively.

Sanitary Conditions.—The Principal Medical Officer, Surgeon Colonel J. Colahan, M.D., reports that the sanitation of the various barracks, camps, &c., in the Command was carefully attended to and maintained in as satisfactory a condition as practicable.

In Natal, at Pietermaritzburg, certain insanitary conditions were found to exist, and were brought to notice; the surface drainage was unsatisfactory, and the ground about the barracks uneven, so that water was apt to lodge. The drains, in many instances, were badly constructed, and did not extend far enough to carry the contents a sufficient distance from the vicinity of the buildings. In some cases the barrack rooms gave too little superficial area, rendering it necessary to place the cots too close to each other. Many of the iron huts are extremely hot in the summer, and it is recommended that these should be lined with wood or other suitable material, and that ridge ventilators should be provided. The Artillery stables are badly situated, in a hollow, and, though great care is taken, it is difficult to keep them and the ground in their vicinity clear. The drainage of the officers' quarters was also found to be unsatisfactory, but it is said that improvements are taking place in this direction, and in others also, to remove the evils compained of.

At Cape Town the main barracks are situated in the town facing the market square, and are surrounded on the other three sides by an insanitary neighbourhood. The barrack-rooms are large and well ventilated, but badly lighted, and have no means of warming in cold and damp weather. The Castle, situated at the north-east of the town, on the shores of the bay, contains barracks, military prison, and offices. The drainage on two sides of it was at times offensive; the sewers discharge on to the sea beach, but appear not to be carried out far enough. The station hospital, about half a mile from the Castle, and close to the sea shore also, it is said, suffers from the

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insanitary condition of the beach, which, it is thought, may retard the convalescence of patients, if it does not actually cause disease. At Simonstown the barracks are old, and in an unsatisfactory condition, but it is stated that their demolition is under consideration. At Wynberg the accommodation in the station hospital is insufficient, especially with regard to provision for infectious, lunatic, or ophthalmic cases. Of the military prison in the Castle, it is said that the cells are defective in ventilation and accommodation, but it is understood that a new military prison will shortly be erected at Wynberg. *South Africa and St. Helena.*

The water supply for the use of the troops is reported to have been generally good and sufficient, and the dry earth system of conservancy, which is in general use, has been carried out satisfactorily.

Among the improvements carried out may be mentioned that at the station hospital, Cape Town, where some overcrowding existed, reappropriation has been made, giving sufficient cubic space and superficial area. In the main barracks the married quarters were improved by reappropriation and enlargement, and in the Castle barracks several minor improvements in drainage were carried out.

At Pietermaritzburg a general extension and improvement of the surface drainage was being undertaken, and some of the huts have been re-roofed and re-floored. At Etshowe improvements have been made in ablution arrangements, and trees have been planted in front of the hospital to give shade and shelter.

Mafeking, in British Bechuanaland, was occupied as a military station from May to November; the troops were under canvas, on a suitable site, with sanitary surroundings; the general health of the men was good. N'Kandhla, Zululand, which was opened as a station in October 1890, was closed in October of the year under report. This camp also proved very healthy. Howick, Natal, as already shown, was occupied by mounted troops from Pietermaritzburg during the epidemic of enteric fever at the latter place. The men were under canvas, and their health during the period was good.

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IX.—ON THE HEALTH OF THE TROOPS SERVING IN THE ISLAND OF MAURITIUS.

Sickness and Mortality.

Mauritius.

The average strength of warrant officers, non-commissioned officers and men serving in the Command during the year was 580. The garrison consisted of No. 4 Company, Southern Division, Royal Artillery, until July, when it left for England, having been relieved by the 23rd Company of the same division; headquarters 1st Battalion, North Staffordshire Regiment; detachments Royal Engineers, Army Service Corps, Medical Staff Corps and Ordnance Store Corps, and Garrison Staff.

In the following table the principal statistics of sickness and mortality among the troops are given:—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
580	684	14	1	15	8	8	35·42	1179·4	25·86	13·79	13·79	61·07

Compared with similar results in the previous year a decrease of 402·0 per 1,000 has occurred in the ratio of admission, and one of 30·29 in that of constantly sick; but there was an increase in the death rate of 12·29; and compared with similar average rates for the preceding ten years the decrease in admission rate is equal to 627·6, and that in the rate of constant inefficiency to 23·36, while the increase in mortality rate is equal to 10·53 per 1,000. The average sick time to each soldier was 22·29 days, which is shorter than in the previous year by 11·06 days, and than the average period in the preceding ten years by 8·52 days. The average duration of each case of sickness was 18·90 days, shorter than in 1890 by 2·19, but longer than the decennial average period by 1·85 days.

In Abstract XL. will be found the principal statistics of sickness and mortality in arms of the service and individual corps. In the Artillery the admission mortality and constantly sick rates were higher than the corresponding ratios in the Infantry. Compared with similar results in the previous year, the admission rate in the Artillery, 1351·3 per 1,000, shows a decline of 694·1, and the constantly sick rate, 70·45, is also lower by 67·05. In the Infantry the admission and constantly sick rates, 1171·0 and 61·94 per 1,000, have declined by 411·6 and 24·64 respectively. The troops were stationed at Curepipe and Port Louis, the average strength at the former being 385 and at the latter 195.

As to the effect of age on sickness and mortality, it is calculated that among men under 20 years of age, average strength 22, the sick rate was 1863·6, and the death rate 90·91 per 1,000; among men between 20 and 25 years the admission and mortality rates were 1410·6 and 19·88 per 1,000, the former being lower but the latter higher than the similar rate in the previous year; among men between 25 and 30 years of age the admission rate was 696·0, and the death rate 13·12 per 1,000, comparing favourably with the previous year's report; and among men over 30 years, with a small average strength,

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the admission rate was 2034·5 and the death rate 103·45 per 1,000. With regard to service in the Command the admission ratio among men in their first year was 1206·8 per 1,000, almost the same as in the previous year; among men in their second year of service the ratio was 1149·6 per 1,000, a decrease of 713·1, and among men in their third year of service, average strength only 13, the ratio was 538·5 per 1,000. Of the 14 deaths in the Command, 13, being in the rate of 29·54 per 1,000 as compared with 26·45 in the previous year, occurred among men in their first year of service. The remaining death was that of a man who was in his second year of service in the Command. *Mauritius.*

The more important statistics of sickness and mortality according to the different groups and orders of diseases will be found tabulated in Abstract XI.

GENERAL DISEASES. — *Diseases dependent on Morbid Poisons.* — Three admissions are shown under the head of *eruptive fevers*; two on account of scarlet fever, and one for small-pox, a very mild case; of the latter disease a serious epidemic existed among the civil population. *Enteric fever* caused 29 admissions and 9 deaths, being in the ratios of 50·0 and 15·52 per 1,000 respectively. Compared with corresponding ratios in the previous year, the admission ratio has increased by 34·5 and the death rate by 13·58, and compared with similar average ratios for the preceding five years the former is higher by 42·9 and the latter by 13·31. The per-centage of mortality to attack was 31·0 as compared with 12·5 in 1890. The Senior Medical Officer, Brigade Surgeon Lieut.-Colonel C. A. Maunsell remarks that this was the most serious epidemic of typhoid fever which ever occurred amongst the troops in the island. The outbreak occurred in the earlier part of the year. All the cases, with one exception, were treated at Curepipe, but of these 28 cases 11 originated at Port Louis. A special commission was held on this outbreak with a view of determining its causation, and of the adoption of measures which would tend to prevent the occurrence of the disease in future.

Dysentery was the cause of 7 admissions, being in the ratio of 12·1 per 1,000, which is less than the preceding year by 4·3, and considerably below the average rate. Of the cases, 6 were treated at Curepipe and 1 at Port Louis.

Malarial Fevers.—208 admissions are returned, equal to a ratio of 358·6 per 1,000, which is lower by 323·6 than the corresponding rate in the previous year, and by 226·2 than the average rate for the preceding five years. The average number constantly sick from these fevers was equal to 13·00 per 1,000, which is less than a third of the similar rate in 1890, and less than half the quinquennial average rate. Though the above ratios show a considerable diminution of the prevalence of malarial fevers of late years, yet these diseases still cause a very large part of the total number of admissions. The Senior Medical Officer states that he has no doubt that more than nine-tenths of this form of sickness, invaliding, and inefficiency was due to residence in Port Louis and Fort George. The cases comprise 58 of ague and 150 of remittent fevers; all the former and 132 of the latter were treated at Curepipe and the remaining 18 at Port Louis.

Venereal Diseases.—14 admissions are shown under the head of *primary syphilis*, being in the ratio 24·1 per 1,000, which is lower than that in the preceding year by 22·4, and than the five years' average rate by 23·3. Adding the sickness for simple venereal ulcer, which caused 16 admissions, the ratio of admissions for primary venereal sores amounted to 51·7 per 1,000, which, however, is only about half the rate in the previous year, and less than half the average rate. *Secondary syphilis* caused 15 admissions or 25·9 per 1,000, as compared with 32·9 in the previous year, and with 30·5 the average rate. *Gonorrhœa* was the cause of 39 admissions, being equal to a ratio of 67·2 per 1,000, which shows a decline of 54·9 from the last year's rate, and one of 71·8 from the average rate of five years. Including all forms of venereal diseases the total ratio of admission was 144·8 per 1,000, being less than the corresponding rate in the previous year by 112·9, and less than the quinquennial average rate by as much as 132·2. The total amount of constant inefficiency on account of these diseases was equal to 10·52 per 1,000, a reduction of 8·65 from the ratio in 1890, and of 9·57 from the average rate.

Parasitic Diseases were, as in the previous year, represented by 3 admissions for tænia solium. Under the head of *alcoholism* a fatal case of delirium tremens is returned, and under the head of *debility* 7 admissions are shown.

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Mauritius.

Rheumatism caused 13 admissions, equal to a ratio of 22·4 per 1,000, a decline of 8·6 from the previous year's rate, and one of 3·3 from the average rate. No case of rheumatic fever was returned.

Tubercular Disease of the lung caused a single admission, and there was one death from this cause in an invalid who had left the Command.

Other diseases of this group caused 3 admissions, all being cases of papilloma.

LOCAL DISEASES.—*Diseases of the Nervous System.*—9 admissions are returned, being in the ratio of 15·5 per 1,000, an increase of 1·9 on the previous year's rate, and of 1·7 on the average rate of five years. The admissions included 3 of neuralgia, 3 of epilepsy, and one of mental disease.

Diseases of the Eye were the cause of 4 admissions, and there were 7 admissions for *diseases of the ear.*

Diseases of the Circulatory System.—11 admissions are returned, being at the rate of 19·0 per 1,000, almost the same as that in the preceding year, but rather below the average rate. The admissions were 8 for palpitation, 2 for valve disease of the heart, and one for phlebitis. *Diseases of the respiratory system* were the cause of 16 admissions, or 27·6 per 1,000, which is lower than the rate in the previous year by 1·5, but above the average rate of five years by 8·6. Bronchial affections were the cause of 12 of the admissions and there were 2 for pleurisy, 1 for pneumonia, and 1 for cirrhosis of the lung.

Diseases of the Digestive System caused 94 admissions and 1 death. The admission ratio, 162·1 per 1,000, is higher than that in the preceding year by 28·4, and above the quinquennial average rate by 60·3. The principal causes of admissions were diarrhœa 38 cases, and affections of the mouth and throat 23. The death was due to abscess of the liver.

Diseases of the Lymphatic and Glandular System with 33 admissions, gave a ratio of 56·9 per 1,000, about the average rate, but a good deal lower than in 1890.

Diseases of the Urinary System caused 1 admission only, a case of incontinence of urine.

Diseases of the Generative System gave a ratio of 46·6 per 1,000, considerably below the average rate as well as that of the preceding year.

Diseases of the Organs of Locomotion were represented by 3 cases of synovitis.

Diseases of the Connective Tissue gave an admission rate of 27·6 per 1,000, in excess of the average rate by 6·4.

Diseases of the Skin.—44 admissions are returned, ulcers, boils, and eczema being the principal causes. The admission rate 75·9 per 1,000, while a good deal above the average rate, differs but little from that in the previous year.

Injuries.—73 admissions are recorded, the ratio being 125·8 per 1,000, a little in excess of that in the preceding year and above the average. Among the admissions were 4 for fractures, 3 for burns, and 1 for sunstroke, the remainder being contusions, wounds, or sprains, &c. There were 3 deaths, one from accidental drowning, one from gunshot wound, and one from wound of throat; the last two were cases of suicide.

Invaliding.—The number of men invalided home during the year was 8, being in the ratio of 13·79 per 1,000, which is lower than the corresponding rate in the preceding year by 75·36, and below the average rate of the previous ten years by 34·38. Of the men invalided 4, or 9·50 per 1,000, belonged to the infantry, 2 to the engineers, 1 to the artillery, and 1 to departmental corps. With regard to age 1 man, equal to a ratio of 45·45 per 1,000, was under 20 years of age, 4 men, or 13·24 per 1,000, were between 20 and 25 years, and 3 men, or 103·45 per 1,000, were over 30 years of age. As to service in the Command, 3 men, or 6·81 per 1,000, were in their first year, and 5 men, or 39·37 per 1,000, were in their second year. The causes of invaliding were malarial fever 3 cases, nervous affections 2, and cirrhosis of lung, rheumatism, and dysentery 1 case respectively. The number of men finally discharged by invaliding was also 8, equal to 13·79 per 1,000, a decline of 9·46 from the previous year's rate and of 2·51 from the decennial average

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rate. The chief causes of final discharge by invaliding were diseases of the nervous system 3 cases, and diseases of the circulatory system 2 cases. *Mauritius.*

Officers.—The average strength was 31 and there were 14 cases of sickness, equal to a ratio of 451·6 per 1,000, a decrease of 178·0 from the corresponding rate in the preceding year. The principal causes of sickness were malarial fevers, and there was one case of enteric fever. One officer was invalided, on account of aural disease.

Women.—The average strength was 35, and the number of cases of illness was 5. The admission ratio, 142·8 per 1,000, shows a decrease of 220·8.

Children.—The average strength was 64, the number of attacks of illness was 19 and there were 3 deaths. The sick rate, 296·9 per 1,000, has declined by 50·0 from the last year's rate. Malarial fevers were the chief causes of sickness. The deaths were two from diarrhœa, and one from convulsions.

Sanitary Conditions.—The Senior Medical Officer reports that several improvements in the sanitary condition of Curepipe took place during the year, among which may be mentioned the erection of a block of officers' quarters, which is a substantial building constructed on good sanitary principles, with concrete sub-floors, well ventilated, and with wooden shingle roof. A large verandah shelters the walls from the drifting south-east winds. The surface drainage about these blocks still required completion. Two blocks of warrant officers' quarters built of brick with shingle roofs were also completed and occupied during the year; they were found to be in every way satisfactory. A two-storied block of soldiers' quarters was also completed and occupied; it is a very good barrack with a few minor defects, such as the unequal width of the verandahs, rendering the narrow one not much use in cold and wet weather, and the floor of the lower verandah should be raised above the ground. A married soldiers' block was completed in which the quarters are extremely good, well lighted and ventilated, with outside kitchens attached; some improvement in the drainage arrangements is said to be yet necessary. The new hospital extension was approaching completion at the end of the year. Commodious accommodation for the Army Service Corps establishment was finished.

Among sanitary requirements the Senior Medical Officer alludes to a complete system of water supply to provide that each building should have pure filtered water laid on; a scheme for this purpose has been sanctioned. Improvement of the surface drainage, and draining all swampy ground. The construction of a room for drying wet clothing is said to be a very necessary addition to the barrack accommodation, also the enlargement and improvement of the present infectious hospital.

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X.—ON THE HEALTH OF THE TROOPS SERVING IN THE ISLAND OF CEYLON.

Sickness and Mortality.

I.—White Troops.

Ceylon.

The average strength of warrant officers, non-commissioned officers, and men was 1,251. The force comprised half of No. 4 Company and half of No. 16 Company Southern Division, Royal Artillery, half of No. 41 Company Royal Engineers, the 1st Battalion Gordon Highlanders, detachments Army Service Corps, Medical Staff Corps, and Ordnance Store Corps, and Garrison Staff. Drafts for the artillery and infantry arrived from England in January.

The headquarters and six companies of the infantry battalion were stationed at Colombo until July, when one company was sent to Kandy to increase the force there, which already included one company. The remaining company of infantry was stationed at Trincomalee. Of the artillery, one half company was stationed at Colombo, and the other at Trincomalee, where also were the greater part of the engineers.

In the following table are given the more important of the statistics of sickness and mortality among the troops:—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average constantly Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids Sent Home.	Invalids finally Discharged.	Average constantly Sick.
1,251	1,147	14	1	15	44	28	67·28	916·8	11·99	35·17	22·38	53·78

If this table is compared with that given for the previous year, it will be seen that the admission ratio has increased by 73·4, and the death rate by 2·26, but there is a fractional decrease in the rate of constantly sick; while compared with corresponding ratios for the preceding ten years, a decline is observed in all the rates, being as much as 241·0 in the case of admission, ·84 in that of death, and 9·60 in that of constant inefficiency through sickness. The average sick time to each soldier was 19·63 days, less by a fraction of a day than the corresponding period in the previous year, and than that for the average of the preceding ten years by 3·50 days. The average duration of each case of sickness was 21·41 days, which is shorter than in 1890 by 2·08 days, but longer than the decennial average period by 1·43 days.

The statistics of sickness and mortality in arms of the service and in particular corps is shown in Abstract XL. In the artillery the admission and constantly sick rates were 822·3 and 43·76 respectively, but taking the half companies separately, the 4th, at Trincomalee, gave an admission rate of 966·7 per 1,000, and a constantly sick rate of 41·92, while the 16th at Colombo gave ratios of 703·4 and 47·12 respectively. In the engineers the admission and constantly sick rates were highest, 1421·1 and 64·34 per 1,000, and next in the infantry, 924·5 and 57·16, while, in departmental corps, they were lowest, 218·7 and 9·37 respectively. The mortality rate was highest in the engineers, dependent on three deaths, 39·47 per 1,000, next in the departments, 31·25 per 1,000, there having been one death, followed by 16·53 in the artillery de-

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pendent on four deaths, and 7·77 in the infantry dependent on seven deaths. Compared with corresponding ratios in the preceding year, the admission and constantly sick rates in the artillery show a decline, but the mortality rate has increased. In the infantry in this comparison, all the ratios show some increase. *Ceylon.*

With regard to the influence of age on sickness and mortality, the admission ratio among men under 20 years of age was very high, 1480·0 per 1,000, but the average strength at this age was very small. The ratio among men between 20 and 25 years of age was 962·4, that among men between 25 and 30 years of age 914·3, and that among men over 30 years of age 480·4 per 1,000. With the exception of the last, all the ratios are higher than the corresponding ones in the previous year. Of the deaths, 7, or 10·11 per 1,000, were among men between 20 and 25 years of age, 6, or 13·89 per 1,000 among men between 25 and 30 years of age, and 1 man, or 9·80 per 1,000 over 30 years of age. The first two rates are higher and the last lower than the corresponding rates in the previous year. As to service in the Command, the admission rate among men in their first year was 700·7 per 1,000, that among men in their second year 825·2, that among men in their third year 1102·5, and that among men over three years' service in the Command, 927·2 per 1,000. In the second year of service there was a decrease of admission rate as compared with that in the preceding year, but in all the other ratios an increase is observed. Of the deaths, 4, or 9·07 per 1,000, occurred among men in their first year of service in the Command, 1, or 9·71 per 1,000, a man in his second year of service, 7, or 12·59 among men in their third year of service, and 2, or 13·24 per 1,000 among men over three years' service in the Command. With the exception of the first in which there is scarcely any change, all these death rates are higher than the corresponding ones in the preceding year.

The more important of the statistics of sickness and mortality arranged according to the different groups and orders of diseases are shown in Abstract XII.

General Diseases.—*Diseases dependent on Morbid Poisons.*—There were no admissions for *eruptive fevers*, but *enteric fever* caused 13 admissions and 2 deaths, being in the ratios of 10·4 and 1·60 per 1,000 respectively. The admission rate is higher than that in the preceding year by 5·5 and the death rate by ·63, but compared with similar average rates for the previous five years there is a decline of ·8 in the former and one of 3·65 in the latter. The per-centage of mortality to attack was 15·4, as compared with 20·0 in 1890, and a five year's average rate of 46·7. One case occurred at Kandy, contracted while on furlough up country; all the remaining cases occurred at Colombo, and of these the Senior Medical Officer, Brigade Surgeon Lieut.-Colonel W. C. Robinson, remarks that he believes the disease was contracted in the native quarter of Colombo, and was not due to any insanitary condition in barracks.

Simple continued fever caused 61 admissions, equal to a ratio of 48·7 per 1,000, which is below the corresponding rate in the previous year by 11·6, and below the average rate by 37·0 per 1,000. Of the cases 43 occurred at Colombo, 10 at Kandy, and 8 at Trincomalee; they were generally mild in character, and occurred frequently amongst men recently arrived in the country.

Cholera.—One fatal case occurred at Trincomalee, where the disease prevailed for some time as an epidemic among the natives.

Dysentery caused 37 admissions, equal to a ratio of 29·6 per 1,000, which is in excess of that in the preceding year by 5·3, and of the average rate by 8·8. 29 cases were at Colombo, 8 at Trincomalee, and 3 at Kandy.

Influenza was the cause of 32 admissions, or 25·6 per 1,000. All the cases occurred at Colombo, where the disease was somewhat severe among the civil population.

Malarial Fevers.—The admissions numbered 100, and there were 2 deaths. The ratio of admission, 79·9 per 1,000, shows a considerable increase, being by as much as 68·2 higher than in the previous year, and by 61·9 than the quinquennial average rate. The Senior Medical Officer attributes this great increase to the occupation of the new barracks on Ostenburgh ridge at Trincomalee, where a large quantity of virgin soil had been opened, and where a considerable amount of jungle was in close proximity. At Trincomalee

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Ceylon.

alone there were 82 cases of remittent fever and 7 of ague, at Kandy there were 6 cases of remittent fever and 1 of ague, and at Colombo there were 4 cases of ague.

Septic Diseases were represented by a single case of erysipelas.

Venereal Diseases.—Under the head of *primary syphilis* 114 admissions are returned, being at the rate of 91·1 per 1,000, which is above the corresponding rate in the previous year by 17·2, and above the average rate of five years by 35·6. Adding the sickness for simple venereal ulcer the admission rate for primary venereal sores reached 115·1 per 1,000, an increase of 11·0 on the last year's rate, but below the average rate by 62·1. *Secondary syphilis* caused 101 admissions, the ratio being 80·7 per 1,000, a decline of 18·5 from the corresponding rate in the previous year, but an increase of 29·9 on the five years' average rate. *Gonorrhœa* was the cause of 119 admissions, or 95·1 per 1,000, which is above the previous year's rate by 13·4, but below the average rate by 45·9. Including all forms of venereal diseases the admission ratio was 290·9 per 1,000, above the previous year's rate by 5·9, but below the average rate of five years by 78·1. The amount of constant inefficiency on account of these diseases was equal to 21·65 per 1,000, which is in excess of that in the preceding year by 1·34, but below the quinquennial average rate by 1·56.

Parasitic Disease caused 1 admission, and *alcoholism* 3 admissions one being a case of delirium tremens. 23 admissions are returned for *debility*, equal to 18·4 per 1,000, which is the same as the average rate, but below the last year's rate by 8·8.

Rheumatism caused 28 admissions, or 22·4 per 1,000, a decline of 19·4 from the last year's rate, and of 6·5 from the average rate. Among the cases were three of rheumatic fever, all of which recovered.

Tubercular Disease.—8 admissions are returned, all for lung affection, and there was one death. The admission rate, 6·4 per 1,000, shows an increase of 1·5 on that in the preceding year.

The remaining admissions in this group of diseases were 3 of scrofula, and 2 of non-malignant new growth.

Local Diseases.—*Diseases of the Nervous System.*—7 admissions are returned, being in the ratio of 5·6 per 1,000, below the corresponding rate in the previous year by 11·9, and below the average rate of five years by 9·4. Among the admissions were one for mental disease, and one for inflammation of the membranes of the brain, which proved fatal; there was also a death from epilepsy out of hospital.

Diseases of the Eye show 12 admissions, or 9·6 per 1,000, slightly below the average rate, but above the previous year's rate by 6·0. Conjunctivitis was the chief cause of admission.

Aural Diseases were at the rate of 6·4 per 1,000, there having been 8 admissions for inflammation of the external meatus.

Diseases of the Circulatory System also caused 8 admissions, or 6·4 per 1,000, which is lower than the previous year's rate by 5·3 and also below the average. The admissions comprised palpitation 4 cases, valve disease 2, and pericarditis and phlebitis 1 case respectively.

Diseases of the Respiratory System caused 54 admissions and 2 deaths. The admission ratio, 43·2 per 1,000, is in excess of that in the preceding year by 15·0, and above the average rate by 22·8. Of the admissions 44 were for bronchial affections, and of the remainder there were 6 cases of pneumonia, one fatal, 2 of hæmoptysis, a fatal case of abscess of the lung, and a case of pneumonic phthisis.

Diseases of the Digestive System were the cause of 111 admissions, equal to a ratio of 88·7 per 1,000, which is above the previous year's rate by 20·6, but below the average rate of five years by 13·5. The principal causes of admission were affections of the mouth and throat 21 cases, diarrhœa 39, and hepatic diseases 21 cases. There was one death from intestinal obstruction, and one, of an invalid, from abscess of the liver.

Diseases of the Lymphatic and Glandular System caused a ratio of 29·6 per 1,000, considerably below the average rate and to some extent less than in 1890. *Urinary diseases* caused no admissions, but *diseases of the generative*

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system gave a ratio of 42·4 per 1,000, a decline of 7·2 from the previous year's rate, and of as much as 105·6 from the average rate. Simple venereal ulcer was the chief cause of admission, followed by orchitis. *Ceylon.*

Diseases of the Organs of Locomotion gave an admission rate of 7·2 per 1,000, and *diseases of the connective tissue* one of 12·8, both of which are below the rates in the previous year.

Diseases of the Skin were at the rate of 70·3 per 1,000, almost identical with the average rate, but greater than the rate in 1890 by 17·8. The admissions were of ordinary character.

Injuries.—92 are returned, equal to a ratio of 73·5 per 1,000, being rather less frequent than in the preceding year. There were 5 admissions for general injury, four for heat stroke and one for starvation. Three deaths by drowning are reported, one of which was suicidal while in a state of temporary insanity. Local injuries were principally contusions, wounds, or sprains.

Invaliding.—The number of men invalided home during the year was 44 being in the ratio of 35·17 per 1,000, which differs from the corresponding rate in the previous year only by an increase of 1·13, and from the average rate for the previous ten years by one of 3·93. Of the different arms of the service the infantry gave the highest invaliding ratio, 37·73 per 1,000, the artillery being next with 37·19, and the engineers with 13·16. With regard to age, one of the men invalided was under 20 years of age, 22 men, or 31·79 per 1,000, were between 20 and 25 years of age, 17 men, or 39·35 per 1,000, were between 25 and 30 years, and 4 men, or 39·21, were over 30 years of age. As to service in the Command, 6 men, or 13·60 per 1,000, were in their first year of service, 3 men, or 29·13 per 1,000, were in their second year, 31 men, or 55·75 per 1,000, were in their third year, and 4 men, or 26·49 per 1,000, had over three years' service in the Command. The principal causes of invaliding were constitutional syphilis 7 cases or 5·59 per 1,000, debility, 6 cases, or 4·79 per 1,000; tubercular disease 8 cases, or 6·39 per 1,000; and nervous affections 6 cases, or 4·80 per 1,000.

The number of men finally discharged as medically unfit for further service was 28, equal to a ratio of 22·38 per 1,000, which differs only fractionally from the corresponding rate in the previous year, but is above the decennial average rate by 7·36 per 1,000. The principal disabilities necessitating discharge were constitutional syphilis 4 cases, equal to 3·20 per 1,000, tubercular diseases 8 cases, or 6·39 per 1,000, and diseases of the nervous system 6 cases, or 4·80 per 1,000.

Officers.—The average strength of officers was 49, and there were 41 attacks of illness, 1 death, and 4 officers were invalided to England. The ratio of prevalence of sickness was therefore 836·7 per 1,000, an increase of 387·7 on the last year's rate. The principal causes of sickness were fevers 13 cases, including 2 of enteric fever. Hepatic diseases caused 5 attacks of illness, one of them a case of abscess of the liver, which terminated fatally. The causes of invaliding were hepatitis 2 cases, and debility and rheumatism one case respectively.

Women.—The average strength was 58, and there were 70 attacks of illness, and 2 deaths, being in the ratios of 1206·9 and 34·48 per 1,000. The ratio of prevalence of sickness is not so high as it was in the preceding year by 203·8. Debility and affections of the generative system were the chief cause of illness. One of the deaths was due to pneumonia and the other to apoplexy.

Children.—The average strength was 84, and the number of cases treated was 70, equal to a ratio of 833·3 per 1,000, an increase of 33·3 on the last year's rate. There were 5 deaths, or 59·52 per 1,000, an increase of 12·46. The principal causes of sickness were diseases of the digestive system and debility. The deaths were two from tubercular disease and one from dysentery, debility, and Bright's disease respectively.

Sanitary Conditions.—The Senior Medical Officer reports that the sanitary conditions of both barracks and hospitals in the Command during the year were satisfactory, but the lake in Colombo and some streets in the rear of the barracks are in an unsatisfactory sanitary state owing to bad drainage, &c. A large building belonging to the Colonial Government was handed over to the military and converted into headquarter offices and stores. The roofs and ceilings of several of the married quarters at the Galle Face were renewed

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Ceylon.

during the year. The accommodation at the station hospital during the latter part of the year was limited, owing to increase of the garrison, and it is thought that it would be advisable to have a separate hospital erected in their own lines for the Asiatic Artillery. The latrines are on the dry-earth system, but coir dust has been substituted for the earth, and is said to answer its purpose admirably, being a powerful absorbent and deodorizing agent.

At Kandy the hospital guardroom was reappropriated as a ward, and the auxiliary kitchen converted into a guardroom. The water supply from the municipal mains is, it is said, about to be laid on both to barracks and hospital.

At Trincomalee the new barracks in course of erection on Ostenburgh ridge were not found satisfactory for several reasons, and certain alterations both as to site and construction were put forward. The surface drains at Fort Frederick were improved during the year, and some of them cemented. Arrangements were being made for the collecting and storage of rain water in tanks which will probably prevent any scarcity of water in the future.

II.—Black Troops.

The black troops consisted of one company of Ceylon Asiatic Artillery, average strength 124, and the Ceylon (Submarine Mining) Company, Royal Engineers, average strength 39. The artillery were distributed between Colombo and Trincomalee, and the engineers were stationed all at the latter place.

The admissions into hospital were 232, equal to a ratio of 1423·3, and the average number constantly sick was 4·36, equal to 26·75 per 1,000. Compared with the previous year's return there was an increase of 961·0 in the admission rate, and one of 8·56 in the constantly sick rate. One case of small-pox occurred at Colombo, and there were two fatal cases of cholera at Trincomalee, where the disease was epidemic among the civil population. The principal causes of admission were fevers, bronchitis, diarrhœa, and cutaneous affections.

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XI.—ON THE HEALTH OF THE TROOPS SERVING IN CHINA.

Sickness and Mortality.

I.—White Troops.

China.

The average strength of the troops serving in the Command during the year was 1,334. The force consisted of the 10th Battery, Southern Division, Royal Artillery, from the 1st January to the 21st February, when it left for England; the 30th Battery, Southern Division, from the 1st January to the 30th September, and the 38th Battery from Malta on the 10th February to the same date, when these two batteries were amalgamated to form the 25th Company, Southern Division, Royal Artillery, and as such remained in garrison until the close of the year. The following were in the Command throughout the year:—The 1st Battalion Argyll and Sutherland Highlanders, detachments Royal Engineers, Medical Staff Corps, and Ordnance Store Corps, and Garrison Staff.

The only places at which troops are now stationed in China are, Victoria, on the island of Hong Kong, with the outlying forts, and Kowloon, the peninsula on the north of the harbour on the mainland.

The principal statistics of sickness and mortality are given in the following table:—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
1,334	1,651	12	2	14	29	14	72·17	1237·6	10·49	21·74	10·49	54·10

Compared with a similar table for the previous year the ratio of admission has declined by 16·5 per 1,000, but there is a fractional increase in the rate of mortality, and an increase of 2·54 in the rate of constantly sick, while in comparison with corresponding average ratios for the preceding ten years an increase of 171·1 is observed in the admission rate, one of ·88 in the death rate, and one of 1·84 in the rate of constant inefficiency through sickness. The average sick time to each soldier was 19·75 days, which is longer by a fraction of a day than the corresponding period in the previous year, and of the average of ten years. The average duration of each case of sickness was 15·96 days longer than in the preceding year by almost a day, but shorter than the average decennial period by almost two days.

The principal statistics of sickness and mortality according to arms of the service and particular corps will be found in Abstract XL. From this it will be observed that there was a considerable increase in sickness in the artillery, the admission rate being 1594·0, and the constantly sick rate 75·98 per 1,000, which are higher than the corresponding rates in the previous year by 640·8 and 31·87 respectively. The death rate, 17·09, is almost unchanged. In the Royal Engineers the admission ratio, 690·3 per 1,000, shows an increase of 53·3, but the death and constantly sick rates, 6·45 and 29·16, have both

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declined to a fractional extent. In the infantry the ratio of admission, 1266·5 per 1,000 has declined by 177·4, and the ratio of constant inefficiency through sickness, 54·13 per 1,000, is lower by 3·74 than the corresponding rate in the previous year, but the mortality rate, 8·81, has increased by a small fraction.

With regard to the influence of age on sickness and mortality it is found that the admission rate of men under 20 years of age was 1285·7 per 1,000, that among men between 20 and 25 years of age 1274·9, that among men between 25 and 30 years 1309·3, and that among men over 30 years of age 693·0 per 1,000. In the previous year the highest ratio was among men under 20 years of age, after which it gradually decreased. Compared with similar ratios in the preceding year the admission rates among men between 20 and 25 years, and 25 and 30 years of age show an increase, but there was a decrease in the other two. Of the deaths in the Command, 6, or 8·50 per 1,000, occurred among men between 20 and 25 years of age, 3, or 6·35 per 1,000, among men between 25 and 30 years of age, and 3, or 26·32 per 1,000, among men over 30 years of age. In the preceding year the mortality rate was highest among men over 30 years of age.

As to length of service in the Command it is observed that the admission ratio of men in their first year was 1227·2 per 1,000, that among men in their second year 1212·8, that among men in their third 1301·2, and that among men over three years' service in the Command 777·8 per 1,000. In the preceding year the highest admission ratio was among men in their second year of service. With regard to mortality there were 3 deaths, equal to 7·02 per 1,000 among men in their first year of service, 4 or 14·18 per 1,000 among men in their second year, 4 or 7·00 per 1,000 among men in their third year, and 1 death, or 18·52 per 1,000 among men of over three years' service in the Command. In the previous year the highest mortality rate was among men in their first year of service in the Command, after which the rate decreased.

The more important statistics of sickness and mortality, arranged according to the different groups and orders of diseases, will be found in Abstract XIII.

General Diseases.—*Diseases dependent on Morbid Poisons.—Eruptive fevers* were represented by 3 cases of *small-pox* one of which occurred in March and the others in April; all were mild cases and the men bore marks of vaccination. Again, as in the previous three years, there were no admissions for enteric fever. The Principal Medical Officer, Surgeon Colonel H. L. Paterson, remarks that this immunity is remarkable, and seems to bear chiefly on the good quality of the water supply and of the milk used by the troops. Two fatal cases of *cholera* occurred, one on 12th August, and the other on the 14th September. The men belonged to the infantry regiment, but came from different barracks. It is stated that cholera was present at the time both in the treaty ports in the north, and in Singapore, and deaths had occurred on the shipping in Hong Kong harbour, also that there is no doubt that the disease was present among the dense Chinese population of Victoria for some time prior to the first case among the troops. 14 cases of dysentery occurred during the year all mild and easily amenable to treatment, the admission ratio 10·5 per 1,000 is slightly in excess of that in the previous year, but is below the average rate of the preceding five years by 6·6. The remaining admissions in this sub-group of diseases were 4 for mumps.

Malarial Fevers were the cause of 638 admissions and one death. The ratio of admissions, therefore, was 478·3 per 1,000, which is below the corresponding rate in the previous year by 115·3, but above the average rate of five years by 47·9. The average number constantly sick on account of these diseases was equal to a ratio of 10·51 per 1,000, which differs only fractionally from the average rate, but is lower than the previous year's rate by 2·53. Of the admissions, 81 were cases of remittent fever, including that which was fatal, the remainder being cases of ague. The Principal Medical Officer remarks that "though malarious fevers continued to be numerous during the year they "were as a rule of a very mild type and generally were in hospital only for a "short time. Many of the admissions were recurrences of ague in the same "individual, the number of cases being thus much in excess of the number of "persons attacked; there were very few cases of the old severe type of fever. "As during the previous year there have been very extensive disturbances of

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" the soil and of the disentegrated granite, owing to the excavations and deep *China.*
" cuttings required in carrying out the scheme of complete new drainage for
" Victoria and in making sites for new buildings. Much of this work was in
" the immediate vicinity of the barracks, but no connexion has been traced
" between it and the amount of malarious fever among the troops." The fatal case of remittent fever came from Lyemoon, where the patient had been on fort guard for a week. It is stated that the worse remittent cases come from this fort.

Venereal Diseases.—The admissions for *primary syphilis* were 74 in number, being in the ratio of 55·5 per 1,000, which is higher than the corresponding rate in the preceding year by 29·5 and than the average rate of five years by 35·6. Adding the sickness for simple venereal ulcer the admission ratio for primary venereal sores was 152·2 per 1,000, an increase of 16·3 on the last year's rate, and of 43·7 on the five years' average rate. *Secondary syphilis* caused 77 admissions, equal to a ratio of 57·7 per 1,000, which is greater than the rate in the previous year by as much as 20·5, and than the quinquennial average rate by 13·9. *Gonorrhœa* was the cause of 137 admissions or 102·7 per 1,000, which is less than the ratio in 1890 by 24·3, and than the average rate by 7·4. Including all forms of venereal disease the total admission rate was 312·6 per 1,000, an increase on the rate in the previous year of 12·5 and above the average rate by 50·2. The total amount of inefficiency from these diseases was equal to 23·20 men per 1,000, above the rate in the preceding year by 1·68, and above the average rate by 4·62. The Principal Medical Officer remarks that constitutional syphilis is prevalent and on the increase, leads to a great amount of inefficiency, and weakens the systems of a large per-centage of the troops.

Alcoholism accounts for 3 admissions, as compared with 4 in the previous year. The admissions for *debility* were 9 in number; the ratio 6·7 shows a marked decrease from the previous year's rate and from the average rate, probably, it is said, by greater care having been taken to return no disease under this heading when it could be ascertained what had been the chief cause of the condition.

Rheumatism.—35 admissions are returned, of which 3 were rheumatic fever of a mild type. The admission rate, 26·2 per 1,000, is above the last year's rate by 9·9, and above the average rate by about the same.

Tubercular Diseases caused 3 admissions for lung affection, as compared with 5 in the preceding year. Two invalids died from this cause after leaving the Command.

The remaining admissions in this group of general diseases were 3 of non-malignant new growth, one of scrofula, and one of purpura, which proved fatal.

Local Diseases.—*Diseases of the Nervous System.*—7 admissions are recorded, equal to 5·3 per 1,000, below the average rate of five years by 2·1, but fractionally above the last year's rate. The admissions were 3 for neuralgia, 2 for paralysis, 1 for epilepsy, and 1 for melancholia.

Diseases of the Eye caused 5 and *diseases of the ear* 6 admissions. In the previous year the numbers were 5 and 8 respectively.

Diseases of the Circulatory System gave a ratio of 17·2 per 1,000, a decline of 10·3 from the corresponding rate in the previous year, but above the average rate by 6·1. Of the admissions, as many as 20 were caused by palpitation.

Diseases of the Respiratory System.—76 admissions are recorded, equal to 57·0 per 1,000, an increase of 33·2 on the previous year's rate, and of 33·9 on the average rate. 68 of the admissions were for bronchial affections, 4 for pneumonia, 3 for pleurisy, and 1 for pneumonic phthisis. Two deaths occurred, one from pneumonia and one from bronchitis.

Diseases of the Digestive System were the cause of 105 admissions, or 78·7 per 1,000, which is above the previous year's rate by 7·4, but below the quinquennial average rate by 21·0. The principal causes of admission were affections of the mouth and throat 26 cases, dyspepsia 25, diarrhœa 17, and hepatic disease 19 cases. One death occurred from diarrhœa.

Diseases of the Lymphatic and Glandular System caused an admission rate of 26·2 per 1,000 above the previous year's rate by 12·8, and the average by

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10·3. *Diseases of the urinary system* were represented by 2 admissions as in the preceding year. *Diseases of the Generative System* gave an admission rate of 107·2 per 1,000, which is less than that in the preceding year by 19·1, and than the average rate by 4·0. Out of 143 admissions, 129 were for simple venereal ulcer. *Diseases of the Organs of Locomotion* as in the previous year gave 9 admissions, all for synovitis.

Diseases of the Connective Tissue caused a ratio of 34·5 per 1,000, an increase of 20·4 on the last year's rate, and one of 11·7 on the average.

Diseases of the Skin caused 58 admissions, principally boils and ulcers. The ratio, 43·5 per 1,000, is rather below the average, but in excess of that in the previous year by 20·5.

Injuries.—132 admissions and 5 deaths are returned. The ratio of prevalence of injuries was 99·0 per 1,000, above the average rate and that of the preceding year. Contusions, sprains, and wounds were the principal causes of admission. The fatal cases were one of drowning while bathing, one of gunshot wound, suicidal, one of fracture of skull, the result of a blow inflicted by a man who was subsequently tried for manslaughter and acquitted, one of fracture of skull, accidental, from a fall, and one from contusion of abdomen with rupture of viscera, also from a fall.

Invaliding.—There were 29 men invalided home during the year, being in the ratio of 21·74 per 1,000, which is less than the corresponding rate in the previous year by 3·52, and than the average rate for the preceding ten years by 13·75. Of the men invalided, none belonged to the artillery, 26, or 28·63 per 1,000, to the infantry, 2, or 12·90 per 1,000, to the engineers, and 1 man to the Medical Staff Corps. The invaliding rate in the infantry has decreased by 2·02 as compared with the previous year's rate. 2 of the men invalided were under 20 years of age, equal to a ratio of 47·62 per 1,000, 9, or 12·75 per 1,000, were between 20 and 25 years of age, 14, or 29·66 per 1,000, were between 25 and 30 years of age, and 4, or 35·09 per 1,000, over that age. In the previous year the highest invaliding rate was among men under 20 years of age. As to length of service in the Command 6 of the invalids were in their second year, equal to a ratio of 21·27 per 1,000, and 23, or 40·28 per 1,000, were in their third year. In the preceding year the highest invaliding rate was among men in their first year of service in the Command. The principal causes of invaliding were malarial diseases 7 cases, or 5·25 per 1,000, tubercular disease 4 cases, or 3·00 per 1,000, palpitation 4 cases, and constitutional syphilis 3 cases, or 2·25 per 1,000. The number of men discharged during the year as medically unfit for further service was 14, or 10·49 per 1,000, of strength less than in the previous year by 8·08. The principal disabilities necessitating final discharge were diseases of the circulatory system 5 cases, or 3·75 per 1,000, and malarial affections 3 cases, or 2·25 per 1,000.

Officers.—The average strength of officers was 52, and there were 32 attacks of illness, but no death occurred. The ratio of prevalence of sickness was 615·4 per 1,000, a decrease of 12·0 from the similar ratio in the previous year. The principal causes of sickness were remittent fever 7 cases, respiratory diseases 5, and diseases of the digestive system 7 cases. One officer was invalided for dysentery.

Women.—The average strength was 49, and there were 61 cases of illness and 2 deaths. The ratio of prevalence of sickness was 1244·9 per 1,000, a decline of 180·6 on the rate in 1890. The chief causes of sickness were malarial fevers, 10 cases of ague, and 8 of remittent fever, two of which were fatal.

Children.—The average strength was 99, the cases of sickness numbered 175 and there were 7 deaths. The ratio of prevalence of sickness was, therefore, 1767·7, and that of mortality 70·71 per 1,000, the former being lower by 127·6, and the latter higher by 12·58, than the corresponding ratio in the preceding year. The cases treated included 34 of remittent fever, and 15 of ague, 31 of diarrhœa, and 30 of bronchial affections. The deaths were 2 from remittent fever, 2 from debility, and 1 from convulsions, diarrhœa, and burn respectively.

Sanitary Conditions.—The Principal Medical Officer reports that "every "attention was paid during the year by the authorities to all matters likely

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" to affect the health of the troops, and the results were generally satisfactory. *China.*
" The improvements in the city of Victoria with a view of increasing its
" salubrity continue to be carried out. The water supply is one of the most
" perfect to be found anywhere. The general drainage works are on a very
" large scale, and when complete will probably leave little to be desired under
" this head. With such a large population the difficulties in the way of good
" sanitation are great, but will no doubt be gradually overcome."

With regard to the provision of a new hospital to replace the present unsatisfactory hospital ship, it is said that no progress was made during the year. The question of the removal of the troops to a new location has been raised, and the Principal Medical Officer states that he does not think there is much difference of opinion as to the desirability of this from a sanitary point of view. The present barracks have been long in occupation, the sites of some are far from good, and Chinese tenements have been allowed to crowd the vicinity of others. They are also much scattered and inconveniently arranged. In a new cantonment, on a well-chosen and elevated site, these disadvantages could all be got rid of, and with due care and attention to sanitary requirements in the construction of new barracks and their accessories there ought to be a marked improvement in the health of the troops. A site was selected for a hospital for the new Hong Kong regiment of Indian troops to be quartered at Kowloon, but as the building would not be completed by the time the corps would arrive, it was thought temporary provision would be made by utilising the present infantry officer's quarters.]

II.—Asiatic Troops.

The black troops consisted of the corps of Asiatic Artillery, late China Gun Lascars, average strength 224, and since August the newly raised Chinese Company, Submarine Miners, Royal Engineers, average annual strength 18. There was no sickness in the last-named corps. The total average strength was 242, and there were 200 admissions into hospital, or 826·4 per 1,000, 5 deaths, or 20·66 per 1,000, and 5·70 constantly sick, or 23·55 per 1,000. Compared with corresponding ratios in the preceding year there was a decrease of 308·6 in the admission rate, one of 4·34 in the death rate, and 10·85 in the constantly sick rate.

The principal causes of sickness were malarial fevers 83 cases, including 3 of remittent fever, venereal affections 37 cases, and diseases of the respiratory system 24 cases. The deaths were three from pneumonia, one from pleurisy, and one from valve disease of the heart. Three men were invalided, one for constitutional syphilis, tubercular disease of the lungs, and fracture of the bones of the foot respectively.

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XII.—ON THE HEALTH OF THE TROOPS SERVING IN THE STRAITS SETTLEMENTS.

Sickness and Mortality.

I.—White Troops.

Straits Settlements.

The average strength of the force in the Straits Settlements was 1,270. The troops consisted of the 13th Battery, Southern Division, Royal Artillery, until 28th February when it left for England, being relieved by the 26th Company, Southern Division, Royal Artillery, the 2nd Battalion Northamptonshire Regiment, detachments Royal Engineers, Medical Staff Corps, and Ordnance Store Corps and Garrison Staff throughout the year. The force was distributed as follows:—The company of Artillery at Fort Canning, Blakan Mati, and outlying forts; six companies of Infantry at Tanglin, and two companies at Penang, the Engineers at Pulo Brani and Blakan Mati, and the departmental corps at various stations.

The more important of the health statistics of the troops will be found in the subjoined table:—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average constantly Sick.	Ratio per 1,000 of Strength.				
		In the Command.	Of Invalids	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids Sent Home.	Invalids finally Discharged.	Constantly Sick.
1,270	1,463	5	1	6	45	26	118·73	1151·9	4·72	35·43	20·47	93·48

Compared with the corresponding ratios in the previous year, a decrease of 97·1 per 1,000, has occurred in the admission rate, and one of 3·86 in the constantly sick rate, but the death rate has increased by ·74 per 1,000; in comparison with similar average ratios for the preceding ten years, while the ratio of admission has declined by 71·4, and the rate of mortality by 2·26, the rate of constant inefficiency through sickness has increased by 31·35 per 1,000. The average sick time to each soldier was 34·12 days, being shorter than in the previous year by 1·41 days, but longer than the average period for the previous ten years by 11·44 days. The average duration of each case of sickness was 29·62 days, being longer than in 1890 by 1·18 days, and than the decennial average period by 11·08 days.

The statistics of sickness, mortality, and invaliding, in individual corps will be found in Abstract XL. In the artillery the admission ratio was 1158·1, and the constantly sick rate 83·46 per 1,000, the former being an increase of 15·9, and the latter a decrease of 6·63 as compared with the corresponding rate in the preceding year. The death rate was 4·27 as compared with *nil*. In the infantry regiment the ratio of admission was 1195·7, that of mortality 3·20, and that of constant inefficiency through sickness 100·80 per 1,000, which are below similar rates in the previous year by 135·5, 1·99, and 2·30 respectively. In the engineers the admissiou rate 1015·9, the death rate 31·75, and the constantly sick rate 72·22 were all in excess of the previous year's rates. In the staff and departments there was but little sickness and no mortality.

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Straits Settlements.

With regard to the age of the troops, it is found that the admission rate among men under 20 years of age was 1450·0 per 1,000, that among men between 20 to 24 years of age, was 1183·9, that among men between 25 and 30 years 1188·5, and that among men over 30 years of age 740·7 per 1,000. In the preceding year the ratio was small among men under 20 years of age, but increased during the two quinquennial periods up to 30 years of age, decreasing rapidly after that time. With the exception of that of men under 20 years all the ratios in the year under report are lower than those in the previous year. With regard to mortality, 4 deaths, or 5·53 per 1,000, occurred among men between 20 and 25 years of age, and 1 death, or 9·26, in a man over 30 years. In the previous year there were also 5 deaths, but 1 under 20 years of age, 2 between 20 and 25, and 2 between 25 and 30 years.

As to length of service in the Command, it is calculated that the admission ratio among men in their first year of service was 1207·4 per 1,000, that among men in their second year 1343·9, that among men in their third year 1033·0, and that among men over three years' service in the Command, 520·0 per 1,000. In the previous year the highest admission rate by far was among men in their first year of service, falling during the next two years. Of the deaths, three, or 9·29 per 1,000, occurred among men in their first year of service, and two, or 3·47 per 1,000, among men in their third year of service. In the preceding year all the deaths occurred among men in their second year of service in the Command.

The principal statistics of sickness, mortality, and invaliding arranged according to the different groups and orders of diseases are given in Abstract XIV.

GENERAL DISEASES.—*Diseases dependent on Morbid Poisons.*—As in the previous year also there was entire immunity from any form of *eruptive fever*. There were 5 admissions for *enteric fever*, two of which died. The admission ratio was 3·9 per 1,000, which is higher than that in the previous year by 3·1 and than the average rate of the preceding five years by 1·6. The death ratio was 1·57, as compared with *nil* in 1890. All the cases occurred at Tanglin, two in July and three in September. There was nothing defective in the sanitary conditions of the barracks to cause disease, and though the exact causes were not localised it is believed the disease was contracted outside barracks. *Simple continued fever* caused 12 admissions, or 9·4 per 1,000, an increase of 2·2 on the last year's rate, but a decrease of as much as 62·9 on the five years' average rate. Of the cases 6 occurred at Fort Canning, 2 at Penang, and 4 at Tanglin. *Cholera* occurred to a small extent among the civil population but no case occurred among the troops. *Dysentery* caused 14 admissions or 11·0 per 1,000, an increase of 3·1 on the last year's rate and of 2·9 on the average rate. Of the cases 8 occurred at Penang, 5 at Tanglin, and 1 at Fort Canning. All did well.

Malarial Fevers.—182 admissions are recorded, equal to a ratio of 143·3 per 1,000, an increase of 40·7 on the similar rate in the preceding year, but below the quinquennial average rate by 8·6. At Tanglin 67 cases of ague occurred, 15 of remittent fever, and 1 of malarial cachexia. The medical officer in charge remarks that it has generally been supposed that these fevers are derived from the swamps south of the barracks, which extend over many square miles towards the sea and in the vicinity of which the rifle range is situated. At Penang there were 35 cases of ague and 3 of remittent fever; the cases were generally mild. The remaining cases, 56 of ague and 5 of remittent fever, occurred at Fort Canning. Here also the cases were mild and generally without complications or sequelæ.

Venereal Diseases.—The number of admissions for *primary syphilis* was 124, being in the ratio of 97·6 per 1,000, which is lower than the corresponding rate for the previous year by 21·7, but above the average rate for the preceding five years by 28·9 per 1,000. Including simple venereal ulcer, the admissions for which were 208 in number, the ratio of admission was 261·4 per 1,000, which is in excess of the last year's rate by 18·8 and above the quinquennial average rate by 85·5. The number of admissions for *secondary syphilis* was 208, equal to 163·8 per 1,000, which differs from the rate in the previous year by an increase of only 1·5, but is higher than the five years' average rate by as much as 91·9. *Gonorrhœa* caused 187 admissions, or 147·2 per 1,000, a

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Straits Settlements.

decline of 76·3 from the corresponding rate in the preceding year, and one of 15·5 from the average rate. Taking all the forms of venereal disease together the total number of admissions numbered 727, very nearly half the admissions from all causes, the admission ratio, 572·4 per 1,000, though lower than in the previous year by 56·0 was higher than the average rate for the preceding five years by 161·9. The total number of men constantly sick from these diseases was 72·36, the total on account of all diseases being 118·73. The ratio of constant inefficiency for venereal disease was, therefore, 56·97 per 1,000, a fractional increase on the rate in 1890, and higher than the quinquennial average rate by 24·67. From the above it will be observed that though the prevalence of these diseases is still considerably above the average yet there was some little improvement as compared with the preceding year, as regards gonorrhœa and primary syphilis, though not as regards secondary disease and simple venereal ulcers.

Alcoholism.—10 cases are returned, equal to a ratio of 7·9 per 1,000, as compared with 4·8 in the previous year. Of the admissions one was for delirium tremens.

Debility caused 22 admissions, or 17·3 per 1,000, a decrease of 5·0 from the last year's rate, and below the average rate.

Rheumatism.—Under this head 16 cases are recorded, being in the ratio of 12·6 per 1,000, a decline of 5·7 from the corresponding rate in 1890, and below the average by 1·6. Of the cases 11 occurred at Tanglin, 4 at Penang, and 1 at Fort Canning.

Tubercular Disease of the lung caused two admissions as compared with three in the previous year. One death occurred, an invalid after leaving the Command.

Other Diseases of this group were the cause of 18 admissions, all but one, a case of anæmia, being for non-malignant new growth. There was one death from tumour of the brain.

Local Diseases.—*Diseases of the Nervous System* caused 13 admissions, equal to a ratio of 10·2 per 1,000, an increase of 3·0 on the last year's rate, and one of 5·7 on the quinquennial average rate. There were 4 admissions for mental disease, and of the remainder the principal cause was neuralgia.

Diseases of the Eye were the cause of 15 admissions, of which more than half were due to conjunctivitis. The admission rate, 11·8 per 1,000, is below the corresponding ratio in 1890 by 6·5, and below the five years' average rate by 17·9.

Diseases of other Organs of Special Senses.—21 admissions are returned, equal to a rate of 16·5 per 1,000, which differs only fractionally from the average rate, but is below the last year's rate by 5·0.

Diseases of the Circulatory System.—Only 3 admissions are recorded, two for valvular disease of the heart, and one for palpitation. The admission ratio, 2·4 per 1,000, is lower than in the previous year by 5·5, and than the average by 4·0.

Diseases of the Respiratory System caused 24 admissions and 1 death. The admission ratio, 18·9 per 1,000, has declined from the last year's rate by 12·9, and is below the average rate by 5·8, three-fourths of the admissions were for bronchitis, and the remainder were 3 for pleurisy and one for laryngitis, pneumonia, and pneumonic phthisis respectively. The last-named case proved fatal.

Diseases of the Digestive System.—108 admissions are returned, being in the ratio of 85·0 per 1,000, which is above the corresponding rate in 1890 by 23·7, and above the quinquennial average rate by 10·4. The principal causes of admission were affections of the mouth and throat 23 cases, dyspepsia 22, diarrhœa 34, and hepatic affections 8, including two cases of abscess of the liver.

Diseases of the Lymphatic and Glandular System were the cause of 42 admissions, or 33·1 per 1,000, as compared with 58·1 in the previous year, and 47·6 the average rate.

Diseases of the Generative System.—The admissions numbered 226, of which as many as 208 were cases of simple venereal ulcer. The admission rate, 177·9 per 1,000, is higher than that in previous year by 28·3, and than the average rate of five years by 42·4.

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Diseases of the Organs of Locomotion.—5 admissions are returned, the ratio, 3·9 per 1,000, being below the last year's rate by 6·4 and the average rate by 5·9. *Straits Settlements.*

Diseases of the Connective Tissue were at the rate of 30·7 per 1,000, which is in excess of the previous year's rate by 7·6, but below the average rate by 4·4.

Diseases of the Skin caused 66 admissions, equal to a ratio of 52·0 per 1,000. These affections were much less prevalent than in the previous year, and than the average, the ratio showing a decrease of 29·1 from the rate in the former and one of 42·8 from that of the latter. The principal causes of admission were boils, ulcers, and ringworm.

Injuries.—The were 98 admissions for injury and one death. The admission rate, 77·2 per 1,000, is lower than the corresponding rate in the previous year by 9·5, and below the five years' average rate by 40·0. There was one admission for multiple injury and one death from sunstroke. The cases of local injury were principally contusions, wounds, and sprains.

Invaliding.—The number of men invalided home during the year was 45, being in the ratio of 35·43 per 1,000, which is higher than the corresponding rate in the preceding year by 15·54, and above the average rate for the previous ten years by 12·73. Of the men invalided 38, or 40·64 per 1,000, belonged to the infantry, 4, or 17·09 per 1,000, to the artillery, and 3, or 47·62 per 1,000, to the engineers. As to the ages at which men were invalided it is found that 20 men, or 27·66 per 1,000, were between 20 and 25 years of age, 17 men, or 40·57 per 1,000, between 25 and 30 years, 7, or 64·81 per 1,000, over 30 years, and 1 man under 20 years of age. With regard to length of service in the Command 28 men, or 48·61 per 1,000, were in their third year of service, 12, or 34·68 per 1,000, in their second year, 3 over three years' service, and 2 men under one year's service in the Command. The principal causes of invaliding were constitutional syphilis 15 cases, or 11·81 per 1000 debility 5 cases, or 3·94 per 1,000, diseases of the circulatory system 5 cases, diseases of the respiratory system 4 cases, or 3·15 per 1,000, and tubercular diseases 3 cases, or 2·36 per 1,000.

The number of men discharged as medically unfit for further service was 26, equal to a ratio of 20·47 per 1,000, which is in excess of the corresponding ratio for the preceding year by 8·54. The principal disabilities necessitating final discharge were diseases of the circulatory system 6 cases, or 4·72 per 1,000, constitutional syphilis 4 cases, or 3·15 per 1,000, and diseases of the nervous system 3 cases, or 2·36 per 1,000.

Officers.—The average strength of officers was 51, and there were 26 attacks of illness, being in the ratio of 509·8 per 1,000, which is less than in the preceding year by 156·8. The principal causes of sickness were simple continued and malarial fevers. No death occurred. Two officers were invalided, one on account of congestion of the brain, and the other on account of constitutional syphilis.

Women.—The average strength was 35, and there were 26 cases of sickness. The ratio of prevalence of sickness, therefore, was 742·8 per 1,000, which is lower than the rate in the previous year by 14·8. Debility and diseases of the generative system were the chief causes of sickness.

Children.—The average strength was 43, and the number of cases of illness was 21. The ratio of prevalence of sickness, 488·4 per 1,000, is lower than that in the preceding year by 78·2. Among the cases treated were five of measles, four of simple continued fever, and three of diarrhœa. One death is reported, the cause of it having been enteritis.

Sanitary Conditions.—The Senior Medical Officer, Brigade Surgeon Lieutenant-Colonel M. Cogan reports that nothing appears to have especially affected the health of the troops, except the great prevalence of venereal diseases due to the abolition of repressive legislation, and he particularly alludes to the severity of many of the cases of constitutional disease.

The sanitary condition of all the barracks in the Command is said to have been well attended to, and no defects in sanitation were found in the vicinity of occupied buildings. The accommodation in barracks is ample and the ventilation satisfactory.

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Straits Settlements.

On the island of Blakan Mati temporary barracks were erected, which proved very suitable for requirements; the jungle surrounding these barracks was removed and the conservancy and drainage attended to. It is thought that this island will prove a satisfactory and healthy residence for troops especially when permanent barracks shall have been erected.

With regard to the water supply at Tanglin it is said that in spite of recommendations and schemes for the supply of the barracks from the municipal reservoirs, the water was still derived from wells in barracks. The water was analysed, and all the wells containing water fit for drinking purposes covered in and a small pump attached, by which means the questionable practice of dipping the buckets into the wells was obviated.

Among improvements carried out, it may be mentioned that concrete was laid down under the verandahs surrounding the barrack bungalows, and underneath one of the buildings, and increased attention was paid to the cutting down of undergrowth in the vicinity of the barracks, and to the clearing of surface drains. At Fort Canning the barracks are satisfactory and the ventilation is good. The water supply is from the town waterworks and is carted up to the Fort in barrels. The water in the tanks and wells in the fort is only used for washing purposes; the drinking water is filtered before use. The sanitary condition of the outlying forts is also satisfactory.

At Penang the barracks consist of two rows, each consisting of two large bungalows, in which accommodation is sufficient, and means of ventilation ample. The drainage of barracks and vicinity is good, and some further improvement was made during the year. The water supply is from a hill stream about a mile from the barracks, and is satisfactory both in quantity and quality.

The rations of the troops are good, though it is said that at times the quality of the beef was rather poor. The cooking is sufficiently varied. The clothing of the troops is white or khaki. At Fort Canning and the outlying forts pith hats are supplied to the men and to a certain number at Tanglin; this head dress is said to be admirably suited to the climate.

II.—Asiatic Troops.

The force comprised the Singapore company, Royal Engineers, average strength 49, and a detachment of the Asiatic Artillery, late China Gun Lascars, average strength 15. The total number of admissions was 22, and the average daily sick was 1·48. The admission ratio, 343·8 per 1,000, and the constantly sick-rate 23·12, are in excess of the corresponding rates in the previous year by 31·3 and 8·90 respectively. The principal causes of sickness were venereal diseases 7 cases, and bronchitis 4 cases.

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XIII.—ON THE HEALTH OF THE TROOPS SERVING IN INDIA.

Sickness and Mortality.

India.

The average strength of the warrant officers, non-commissioned officers and men in India was 66,178; the admissions into hospital were 91,811; and the deaths 1,082 of which 1,050 took place in India, and 32 (being those of invalids) on the passage to or after arrival in England. The average number of constantly sick was 5308·78. The rates from these numbers are, for admissions 1387·3, for deaths 16·35, and for constantly sick 80·22 per 1,000 of the strength.

The sickness for each of the three Commands is shown in the following table:—

—	Average Annual Strength.	Admitted into Hospital.	Deaths			Invalids sent Home.	Invalids discharged the Service.	Average constantly Sick.
			In India.	Of Invalids.	Total.			
Bengal - -	40,198	56,708	681	17	698	1,003	615	3267·02
Madras - -	13,256	17,199	188	8	196	415	218	1105·22
Bombay - -	12,724	17,904	181	7	188	369	193	936·54
Total - -	66,178	91,811	1,050	32	1,082	1,793	1,026	5308·78
Ten years, 1881—90 - -	614,378	895,966	8,629	459	9,088	16,876	8,150	44986·00

continued.

—	Ratio per 1,000 of Mean Strength.					Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
	Admitted.	Died.	Invalided Home.	Invalids discharged.	Constantly Sick.		
						Days.	Days.
Bengal - -	1410·7	17·36	25·10	15·30	81·27	29·66	21·03
Madras - -	1297·4	14·78	31·31	16·44	83·37	30·43	23·45
Bombay - -	1407·1	14·78	29·00	15·17	73·60	26·86	19·09
Total - -	1387·3	16·35	27·09	15·50	80·22	29·28	21·05
Ten years, 1881—90 - -	1458·3	14·79	27·47	13·26	73·06	26·67	18·29

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I.—Bengal.

Bengal. The average strength of the troops serving in the Command during the year was 40,198 warrant officers, non-commissioned officers and men, differing but very slightly from the strength in the previous year.

In the following table are given the more important statistics of sickness and mortality among the troops during the year:—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average constantly Sick.	Ratios per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally discharged.	Average constantly Sick.
40,198	56,708	681	17	698	1,009	615	3267·02	1410·7	17·36	25·10	15·30	81·27

Compared with the return for the preceding year, the admission ratio shows a decrease of 178·8 and the constantly sick rate one of 7·89 per 1,000, but the death rate has increased by 1·18, and compared with average similar ratios for the previous ten years the admission ratio has declined by 124·8, but the mortality and constantly sick rates have increased by 2·20 and 6·81 per 1,000 respectively. The average sick time to each soldier was 29·66 days, which is shorter than the corresponding period in the previous year by 2·88 days, and longer than the average period for the preceding ten years by 2·48 days. The average duration of each case of sickness, 21·03 days, was longer in both these comparisons by ·56 of a day and 3·34 days respectively.

The loss to the Command by death and invaliding to England was 1,690 warrant officers, non-commissioned officers and men, being in the ratio of 42·04 per 1,000 of average strength, which is higher than the corresponding rate in the previous year by 1·38. The loss to the army by death and final discharge from the service as medically unfit among the troops in the Bengal Presidency was 1,313, equal to a ratio of 32·66 per 1,000 of average strength, which differs only fractionally from the corresponding ratio for 1890.

With regard to the improvement in health of the troops as compared with the previous year, the Principal Medical Officer, Surgeon-Major General A. F. Bradshaw, C.B., remarks that it is referable chiefly to the decline in prevalence of malarial and simple continued fevers and venereal affections, and to the cessation of the epidemic of influenza which prevailed so extensively in India in 1890. The increased mortality was entirely due to the greater prevalence of cholera.

In Abstract XVI. is a table, taken from the report of the Principal Medical Officer, which gives the more important of the statistics of sickness and mortality in the different districts. It is necessary to remark, however, when comparing the statistics of the Allahabad and Oudh districts that the stations of Cawnpore and Fatehgarh which were formerly included in the former district were in the year under report transferred to the latter. The highest admission ratio in any district was 1739·3 per 1,000 in the Presidency district, which gave the second rate in the previous year; this was followed by 1738·8 in the Allahabad district, 1694·8 in the Nerbudda district, and 1612·5 in the Quetta district. Malarial fevers and venereal affections were the principal causes of inefficiency in all these districts, but in Quetta simple continued fever and diseases of the digestive system also contributed to the high sick rate. The lowest admission rate was 949·1 per 1,000 in the Sirhind district, the next above being 1024·0 in the Peshawar district, 1332·8 in the Meerut district, and 1341·9 in the Rohilkhand district. Compared with corresponding ratios in the previous year the only admission rate showing an increase was

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that of Quetta; the said increase being as much as 517·7 per 1,000. Among the instances of decrease the most marked was that in admission rate for the Peshawar district, the decline amounting to 680·3 per 1,000, principally in malarial fevers. Other districts showing a considerable decline in the admission rate were the Meerut district by 439·5, the Nerbudda district by 428·4, the Bundelkhand district by 305·1, and the Sirhind district by 278·0. The highest ratio of mortality was 26·98 per 1,000 in the Allahabad district, due entirely to an outbreak of cholera, which alone gave a death rate of 14·31; the next rate was 22·94 in Oudh, due to enteric fever and cholera, followed by 21·48 in the Peshawar district, 11·98 being due to enteric fever and 5·37 to cholera, and 19·78 in the Nerbudda district, nearly half being due to enteric fever. The lowest ratio of mortality was 10·07 in the Bundelkhand district, the next above, 12·60, in the Sirhind district, 13·81 in the Quetta district, and 15·22 in the Rohilkhand district. Compared with corresponding ratios in the preceding year eight of the districts show an increase in death rate, the most marked being 12·69 in that of the Nerbudda district, 11·26 in that of the Peshawar district, 7·44 in that of the Oudh district, and 7·00 in that of the Allahabad district. The instances of decrease were 9·96 in the rate in Bundelkhand, 4·94 in that in the Meerut district, 1·35 in that in Sirhind, and 7·62 in that of Rohilkhand.

The statistics of sickness and mortality at the different stations in the Command are given in a table in Abstract XVII., taken from the report of the Principal Medical Officer.

Taking first the stations in the plains having an average annual strength of over 150 men, it is found that Barrackpore gave the highest admission ratio, 2392·4 per 1,000, which is higher than the corresponding rate in the previous year, by 428·2, and than the average rate for the preceding ten years by 683·5. This great increase is said by the Medical Officer to have been due to ague, which was very prevalent, not only among the troops, but in the surrounding district. Saugor, which gave the highest rate in the preceding year, came next with a ratio of 2195·4, which is lower than in that year by 344·5, but above the decennial average rate by 395·9. Here, although there were fewer admissions for malarial fevers, there was a considerable increase in the number of cases of venereal disease. Campbellpore stands third with a ratio of 2054·2, an increase of 107·6 on the last year's rate, and of 609·4 on the ten years' average rate; the prevailing disease was venereal, but simple continued fever caused a good many admissions, due to the heat of the summer. The next ratio was 2020·0 at Dum Dum, an increase of 32·1 on the previous year, and of 532·7 on the average rate, followed by 2008·9 at Dinapore, an increase of 28·9 and 415·9 in these comparisons. At Dum Dum the prevailing diseases were malarial fevers, the prevalence of which is attributed to the number of marshes in the neighbourhood, and the impossibility of thorough subsoil drainage from there being no outfall owing to the lowness of the district. Venereal diseases were also prevalent, and to some extent dysentery and rheumatism. At Dinapore malarial fevers and venereal affection each contributed about a third of the total admissions of the year; the prevalence of the former was supposed to be due to the drying up of the ravines, and the subsidence of the water in the rivers. The lowest admission rate was 991·5 per 1,000 at Umballa, a decline of 179·9 from the previous year's rate, and of 256·2 from the decennial average rate. The ratios next above were 997·2 in Peshawar, and 1040·6 in Nowshera, the former being a decrease of 730·5 from the previous year's rate, and of 1119·5 from the average rate, and the latter a decrease of 1067·9 and 491·5 in these comparisons. The improvement in Peshawar was due to the admissions for malarial fever, having fallen to little more than half the number in the preceding year, no doubt caused by the dry and fine weather during the months when this disease is most prevalent. The same may be said of Nowshera. Of the 35 stations the admission rates in 11 were higher than in the previous year, the most notable increase being 517·7 in Quetta, 233·4 in Fyzabad, in addition to that of Barrackpore already mentioned. In 24 stations the rate of prevalence of sickness decreased, among the most important decreases being 898·5 in Amritsar, 627·2 in Muttra, 556·7 in Meerut, 546·4 in Jhansi, 473·6 in Meean Meer, 450·1 in Jubbulpore, and 434·0 in Ferozepore. Compared with the average ratios of the preceding ten years, the admission rates were higher in

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Bengal.

15 stations, the most important among which have already been mentioned, while among the instances of decrease in 20 stations were Delhi 1159·2, Amritsar 1051·9, Fatehgarh 845·9, and Mecan Meer 737·6. The prevailing diseases at all the stations referred to were malarial fevers and venereal affections, the two combined having in almost all instances caused more than half the total number of admissions. The highest ratio of mortality was 43·99 per 1,000 at Allahabad, being an increase of 22·94 on the previous year's rate, and of 24·26 over the decennial average; there were 45 deaths, of which 29 were from cholera, and 4 from enteric fever. Amritsar had the next ratio, 42·65 per 1,000, higher by 28·70 and 26·10 respectively over the preceding rate and the decennial average. The ratio next in order was at Cawnpore, 35·18 per 1,000, an increase of 10·08 and 18·81 respectively in the two comparisons; the majority of the deaths was due to cholera. At Roorkee the death rate was 30·58 per 1,000, a considerable increase over the last year's rate, and over the average rate. Jubbulpore and Dum Dum also gave high death rates, 28·49 and 27·53 respectively, both being considerably in excess of the corresponding ratios in previous years. The lowest mortality rate was 3·61 per 1,000 at Campbellpore; the next above was 5·75 at Saugor, then 7·21 at Nowgong, 7·32 at Fort William, 7·75 at Sitapur, and 7·92 at Shahjehanpur. Of the 35 stations 19 had higher death rates than in 1890. Besides those already referred to may be mentioned that of Fyzabad, 20·67 per 1,000 against 5·81 in the previous year, and 11·74 the average rate, that of Peshawar 20·70 against 8·51 in the preceding year and 14·76 the decennial average, and that of Jullundur with a ratio of 23·92 against 14·78 in 1890, and 16·06 the average. The most notable instances of decrease were in Mecan Meer, 9·81 per 1,000 as compared with 26·20 in the previous year, and 29·47 the average rate of ten years, in Jhansi 10·14 against 25·91 and 21·25, in Delhi 15·82 against 28·85 and 18·69, and in Agra 10·22 against 22·58 and 12·99 respectively.

Among the several hill convalescent depôts it is found that the highest admission rate occurred at Murree, 1549·1 per 1,000, which is an increase of 140·0 per 1,000 on the corresponding rate in the previous year, and above the decennial average rate by 106·6. The principal causes of sickness were malarial fevers and venereal affection, and a mild outbreak of influenza in August. The next highest ratio was 1521·7 per 1,000 at Dalhousie, an increase of 297·7 on the ratio in 1890, and of 48·1 on the average rate; here, also, malarial fevers and venereal affections were the prevailing diseases. The same was the case in Kasauli, where the admission rate, 1402·4 per 1,000, was increased by 238·1 on the last year's rate, though it was lower than the average rate by 374·2. At the remaining convalescent depôts all admission ratios showed a decline as compared with the corresponding rate in the preceding year, and with the decennial average rate; Naini Tal, with a rate of 1225·6 per 1,000, lower by 536·8 and 328·0; Pachmarhi, 1132·7 per 1,000, lower by 595·5 and 571·1; Landour, 1093.8 per 1,000, lower by 836·3 and 702·9, and Darjeeling, 985·7 per 1,000, lower by 534·6 and 236·9 respectively. Malarial fevers and venereal affections were the principal causes of inefficiency, the latter particularly at Landour and Darjeeling. Of the last-named station it is also stated that rheumatism is rather prevalent during the rains, and is sometimes very intractable. The highest death-rate was 50·00 per 1,000, at Landour, above that in the previous year by 1·05, and above the ten years' average rate by 32·84. The next ratio was 37·59 per 1,000 at Naini Tal, an increase on the last year's rate of 26·54, and on the average rate of 22·35. At Murree the death-rate was 28·90 per 1,000; this, though it differs but little from the average rate, is lower than in 1890 by 5·19. At Kasauli, where there were 8 deaths, the ratio was 23·67 per 1,000, double the rate in the preceding year and almost double the average rate. Dalhousie also had a death rate double that of the previous year, being 16·91, and above the average by 6·81. Darjeeling with 11·43 shows a notable decline in both comparisons. At Pachmarhi there was one death as compared with none in the preceding year. Of the principal hill stations garrisoned by healthy troops, and having an average strength of over 150 men, Chanbuttia gave the highest admission rate, 1297·8 per 1,000, which is rather below the last year's rate and the decennial average. The next rate was at Camp Thobba, 1271·5 per 1,000, above the previous year's rate, but below the average. At Ranikhet the rate was 1196·9

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per 1,000, a slight decline from the rate in 1890, but a slight increase on the average rate. Solon gave the lowest admission rate, 697·0 per 1,000, almost identical with the corresponding rate in the previous year, but considerably below the average rate. The ratios next above were 797·0 and 826·5, at Jutogh and Subathu respectively, both being lower than corresponding rates in the previous year and below the average rates of ten years. The highest mortality rate was at Cherat, 31·32 per 1,000, an increase of 22·25 on the last year's rate, and of 16·82 on the average rate. The next death-rate was 27·64, at Gharial, followed by 18·10 at Camp Thobba. Both these show an increase in the comparisons with the previous year's rate, and with the average rate. At several of the smaller hill stations there was no mortality. *Bengal.*

In Abstract XLI. is a table taken from the report of the Principal Medical Officer, giving the more important of the statistics of sickness and mortality of the different arms of the service, as well as of the various corps which served in the Command during the year.

The average strength of the cavalry was 3,280, and there were 4,858 admissions into hospital, 55 deaths, and an average constantly sick of 255·57, the equivalent ratios being 1481·1per 1,000 for admissions, 16·77 for deaths, and 77·92 for constantly sick—all lower than the corresponding rates in the preceding year by 198·0, 4·18, and 9·23 respectively. The average sick time to each soldier was 28·44 days, being 3·37 days shorter than in 1890, and the average duration of each case of sickness was 19·20 days, longer by ·26 of a day than the corresponding period in the previous year.

Comparing the statistics of individual corps, but excluding the 18th Hussars, which arrived in the Command from Mhow on the 31st October, the highest admission rate, 1839·6, is found in the 2nd Dragoon Guards, stationed at Sialkot throughout the year, with a detachment at Topa during the summer; ague furnished the largest number of admissions, nearly a third of the total. The 5th Lancers, at Meerut for 11 months, was next in order with a ratio of 1518·2 per 1,000. This regiment occupied the same station in 1890, but its admission rate in the year under report is 405·3 per 1,000 lower. The 3rd Dragoon Guards, at Rawal Pindi (with a detachment at Topa in the summer), which stood highest in the preceding year, gave the third rate, 1443·1 per 1,000, a fall of 693·2. The lowest admission rate was 1257·5, and occurred in the 1st (King's) Dragoon Guards, stationed at Muttra, till the end of September, when it left *en route* to England; this was closely followed by 1262·5 in the 7th Dragoon Guards, at Umballa, which regiment stood lowest in 1890; the former shows a decline of 431·3 from the preceding year's ratio, but the latter was higher by 158·8 per 1,000. The highest mortality ratio, 24·75, occurred in the 5th Lancers. Of the 15 deaths recorded, 8 were from enteric fever, and 2 from cholera. The next was 21·92, in the 1st (King's) Dragoon Guards, in which there were 8 deaths. The 16th Lancers at Lucknow was third with 14·48 per 1,000, representing 8 deaths, of which 2 were from cholera. The lowest death rate, 9·24, is shown by the 7th Dragoon Guards at Umballa, the next being 12·46 in the 3rd Dragoon Guards, which had the highest ratio in the preceding year. The highest ratio constantly sick was 99·27 per 1,000 in the 2nd Dragoon Guards, which stood highest also in the preceding year, with a ratio of 107·07; the next was 87·69 in the 16th Lancers, followed by 78·74 in the 1st Dragoon Guards, and 75·86 in the 5th Lancers. The lowest rates were 59·89 in the 3rd Dragoon Guards, and 65·90 in the 7th Dragoon Guards.

The average annual strength of the artillery was 6,423 men, and among these there were 10,296 admissions into hospital and 119 deaths, while the number of men constantly sick amounted to 553·58. The equivalent ratios were 1603·0 per 1,000 for admissions, 18·53 for deaths, and 86·19 per 1,000 for constantly sick. Compared with the corresponding figures for 1890, there was a decline in all the ratios, viz., for admissions 109·1, for deaths ·09, and 3·71 for constantly sick. The average sick time to each soldier was 31·46, and the average duration of each case 19·62 days, the former being 1·36 days shorter, and the latter ·45 of a day longer than in the preceding year. Excluding batteries that were only a short time in the Command, the 68th Field Battery at Meean Meer and Jullundur, gave the high admission rate of 2590·6; this, however, was considerably below the ratio in 1890. The 20th Battery, Southern Division, at Barrackpore followed with 2343·4, then the

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Bengal. 51st Field Battery at Dinapore with 2304·6, the 78th Field Battery at Saugor with 2228·8, and the 54th Field Battery at Nowgong with 2187·9. The lowest admission rate, 645·8, is shown by No. 8 Mountain Battery at Umballa and Jutogh, which stood lowest in the preceding year also. No. 6 Mountain Battery at Darjeeling came next with 890·0; the 24th Battery, Southern Division, at Agra following with 947·4 per 1,000. The highest mortality rate was 52·63 per 1,000 in No. 6 Battery, Western Division, at Roorkee, representing 5 deaths, 3 from enteric fever and one from cholera. The next was 48·95 in No. 9 Field Battery at Cawnpore, 5 deaths out of 7 being due to cholera. The 44th Field Battery at Jubbulpore gave a rate of 48·61, representing 7 deaths, 6 from enteric fever. The T Battery, Royal Horse Artillery, had 7 deaths, equal to a ratio of 43·75 per 1,000. There were no deaths in the 24th and 50th Field Batteries, the 7th and 22nd Batteries, Southern Division, and the 11th Battery, Western Division, while low ratios occurred in the 31st Field Battery at Barrackpore and Calcutta, 6·54 per 1,000; H Battery, Royal Horse Artillery at Sialkot, 6·58; Q Battery, Royal Horse Artillery at Umballa, 6·67; and the 46th Field Battery at Fyzabad, 6·71. The highest ratio of constantly sick reached 151·51 per 1,000 in the 4th Battery, Eastern Division, at Ferozepore till the beginning of November when it left for Burma, its previous year's ratio having been only 81·03. This was followed by 126·38 per 1,000 in the 68th Field Battery at Meean Meer and Jullundur, 124·79 in the 24th Field Battery at Jhansi; and 124·02 per 1,000 in the 12th Battery, Western Division, at Roorkee. The 70th Field Battery at Meerut, which in the previous year gave a constantly sick rate of 149·21 per 1,000, had a ratio of 76·72 per 1,000, or nearly half; the ratio in the 71st Field Battery at Meerut also shows a decline to nearly half the previous year's ratio; and the 7th Battery, Southern Division, at Roorkee, a decline from 130·38 to 81·15 per 1,000. Low ratios occurred in the following batteries:—No. 7 Mountain Battery at Quetta till the end of October, 34·77 per 1,000; No. 8 Mountain Battery at Umballa and Jutogh, 51·56; No. 6 Mountain Battery at Darjeeling, 53·30; and No. 3 Mountain Battery at Kalabagh and Rawal Pindi, 55·60 per 1,000.

The average annual strength of the infantry was 29,000 men who furnished 40,167 admissions into hospital, and 461 deaths, while the number constantly inefficient from sickness amounted to 2320·57. The ratio of admission was therefore 1385·1 per 1,000, the death rate 15·90 and the constantly sick rate 80·02 per 1,000, which compared with the corresponding figures for the preceding year, show a decline of 192·5 per 1,000 in the admissions and of 8·95 per 1,000 for constantly sick, while the ratio of mortality was higher by 249 per 1,000. The average sick time to each soldier was 29·21, and the average duration of each case 21·09 days, the former being 3·26 days shorter, and the latter ·51 of a day longer than in the preceding year. Excluding the 2nd Battalion King's Own Yorkshire Light Infantry which left Quetta for the Bombay Command early in March the highest admission ratio among the infantry regiments 2113·9 per 1,000, is found in the 1st Battalion East Surrey Regiment stationed at Dum Dum and Calcutta. The next ratio was 1918·4 per 1,000 in the 2nd Battalion Manchester Regiment at Sialkot. The 2nd Battalion Wiltshire Regiment at Meean Meer was third with 1909·3, followed by the 1st Battalion Royal Fusiliers with 1870·1. The lowest ratio of admission was 699·1 per 1,000 in the 1st Battalion Royal Welsh Fusiliers; the 2nd Battalion West Yorkshire Regiment at Dagshai, Umballa, and Lucknow, gave a rate of 820·0 per 1,000, the 1st Battalion King's Royal Rifle Corps at Rawal Pindi and Gharial one of 902·3; and the 2nd Battalion King's Own Scottish Borderers at Subathu, Umballa, and Meean Meer one of 910·5 per 1,000. While only 8 Infantry Battalions show increased admission rates as compared with the preceding year, lower rates occur in 21; the most notable as regards the former, being the 2nd Battalion Durham Light Infantry at Quetta, and the 2nd Battalion South Wales Borderers at Allahabad, in which the increase reached 417·0 and 415·3 per 1,000 respectively. The most important instances of decrease are shown by the 2nd Battalion Royal Scots Fusiliers at Peshawar and Cherat, in which the admission rate, 1161·7 per 1,000, was less than that of the preceding year by 1061·8, and the 1st Battalion Royal Welsh Fusiliers, and the 2nd Battalion Welsh Yorkshire Regiment, both of which had less than half the

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preceding year's admission rates. Mortality was highest in the 2nd Battalion South Wales Borderers at Allahabad, being in the ratio of 43·24 per 1,000, representing 40 deaths (against 15 only in the preceding year) 28 of which were from cholera; the 1st Battalion Bedfordshire Regiment which arrived at Rawal Pindi from Malta in January gave the next highest rate, 40·33 per 1,000, the number of deaths being 29, of which 20 were from enteric fever; the 2nd Battalion Northumberland Fusiliers at Peshawar, Nowshera, and Cherat, coming third with 33·47 per 1,000, or 33 deaths, 19 being due to enteric fever and 5 to cholera; and the 2nd Battalion Royal Irish Regiment at Lucknow fourth with 31·63 per 1,000 or 26 deaths, 14 from enteric fever and 2 from cholera. The lowest mortality ratio occurred in the 2nd Battalion King's Own Scottish Borderers, 1·06 per 1,000, there being only one death against 14 in the previous year; the next being in the 2nd Battalion Seaforth Highlanders, 1·26 per 1,000. Low ratios of mortality occurred also in the 2nd Battalion Border Regiment, 4·28; the 1st Battalion Royal Fusiliers 5·41; and the 1st Battalion Suffolk Regiment 5·89 per 1,000. The ratio of constant inefficiency from sickness was highest in the 2nd Battalion Royal Irish Regiment at Lucknow, 124·65 per 1,000; the next being 107·86 per 1,000, in the 2nd Battalion South Wales Borderers at Allahabad; closely followed by 107·62 per 1,000 in the 1st Battalion East Surrey Regiment, and 100·13 per 1,000 in the 1st Battalion Leinster Regiment at Agra. The 2nd Battalion Derbyshire Regiment at Jubbulpore, which stood third in the preceding year with a ratio of 114·45 declined to 91·41 per 1,000, and the 2nd Battalion Royal Munster Fusiliers from 112·05 in 1890 fell to 92·25 per 1,000. The lowest constantly sick rate in the infantry occurred in the 1st Battalion Royal Welsh Fusiliers, 42·27 per 1,000, the next above being 46·41 in the 1st Battalion Royal Fusiliers, 50·51 in the 1st Battalion King's Royal Rifle Corps, 56·15 in the 2nd Battalion Royal West Surrey Regiment, 57·64 in the 2nd Battalion West Yorkshire Regiment and 58·76 per 1,000 in the 2nd Battalion Northumberland Fusiliers.

The following table shows as far as possible the statistics of sickness, mortality, and invaliding among the troops according to age:—

TABLE showing the Influence of Age on the Sickness, Mortality, and Invaliding among the Troops in the Bengal Command, during the year 1891.

Ages.	Average Strength.	Admissions.	Deaths.	Invalided.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 20 years - -	1,013	1,205	12	13	1189·5	11·85	12·83
From 20 to 24 years -	19,291	33,611	393	542	1742·3	20·37	28·10
„ 25 „ 29 „ -	14,810	18,080	212	350	1220·8	14·31	23·63
„ 30 „ 34 „ -	3,635	2,940	41	65	808·8	11·28	17·88
„ 35 „ 40 „ -	971	684	14	26	704·4	14·42	26·78
„ 40 years and upwards	246	178	9	13	723·6	36·59	52·85
Not stated - -	232	10	—	—	—	—	—
Total - -	40,198	56,708	681	1,009	1410·7	16·94	25·10

The ratio of admission of men under 20 years of age was not so great as that in the preceding year, but still high. The greatest ratio of sickness was among men between 20 and 25 years of age, after this period the ratios of admission declined through the remaining quinquennia up to 40 years of age, after which there was a slight increase. With the exception of this increase the sequence of ratios was identical with that in the preceding year. Comparing the ratios of the different age periods in the two years the only instance of increase was in that of men over 40 years of age and was equal to 46·9 per 1,000. Of the instances of decrease the most marked were 282·7 per 1,000 among men between 25 and 30 years of age, and 245·5 among men under 20

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years of age. With regard to the ratios of mortality there was slight variation in sequence from that in the previous year. The greatest mortality was among men over 40 years of age, dependent on 9 deaths in a small average strength, and the least among men between 30 and 35 years of age; in the preceding year the least mortality was among men under 20 years of age. Compared with corresponding ratios in the previous year there was a decrease of 1·67 per 1,000 in the ratio of men between 30 and 35 years of age and one of 10·08 in that of men over 40 years of age. In all the remaining ratios there was an increase, being 4·63 in that among men under 20 years of age, 3·60 in that among men between 35 and 40 years of age, and to a less extent among men at other periods of age.

In the following table is given as far as possible the influence of length of service in the country on the sickness, mortality, and invaliding among the troops:—

TABLE showing the Influence of Length of Service in the Country on the Sickness, Mortality, and Invaliding among the Troops in the Bengal Command, in the year 1891.

Years of Service in the Country.	Average Strength.	Admissions.	Deaths.	Invalided.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 1 year - -	6,493	10,958	181	124	1687·7	27·88	19·10
From 1 to 2 years -	6,644	10,483	144	191	1577·8	21·67	28·75
„ 2 „ 3 „ -	6,336	9,687	94	169	1528·9	14·84	26·67
„ 3 „ 4 „ -	6,190	8,188	61	109	1322·8	9·85	17·61
„ 4 „ 5 „ -	5,825	7,051	63	151	1210·5	10·82	25·92
„ 5 „ 10 „ -	7,167	9,306	122	236	1298·5	17·02	32·93
„ 10 upwards -	1,311	1,025	16	29	781·8	12·20	22·12
Not stated - -	232	10	—	—	—	—	—
Total - -	40,198	56,708	681	1,009	1410·7	16·94	25·10

It will be observed that while men under a year's service in the country furnished the highest admission rates, the ratios of the succeeding periods gradually diminish until that of men between 5 and 10 years' service in the country is reached, in which there is an increase. In the preceding year the sequence of ratios was not similar. Comparing the admission rates of the two years it is found that there was an increase of 63·6 in the ratio of men under one year's service in the country, but there was a decline in all the other ratios, the most notable being 396·7 per 1,000 in the ratio of men in their fifth year of service, 316·5 among men between five and ten years' service, and 261·6 among men in their fourth year of service in the country.

With regard to mortality the highest ratio was among men in their first year of service in the country and the next among men in their second year. The ratio further declined among men in their third and fourth years' service in the country but rose among men in their fifth year, and still further among men between five and ten years' service, falling again among men over ten years' service in the country. Compared with corresponding ratios in the previous year there was a decline of 3·11 in the death rate among men in their fourth year of service in the country, of 2·14 in that among men in their fifth year of service, and of 12·36 in that of men over ten years' service; in all the other ratios an increase is observed, being 6·13 among men in their first year of service, 4·97 among men in their second year, 4·29 in that among men in their third year and to a fractional extent in that among men between five and ten years' service in the country.

In Abstract XV. will be found a table showing the admissions, deaths, invaliding, &c. according to the different groups and orders of diseases, and in

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Abstract XVI. will be found the sickness and mortality from the various orders of diseases in each of the administrative circles of the Command. *Bengal.*

GENERAL DISEASES.—*Diseases dependent on Morbid Poisons.*—The number of admissions for *eruptive fevers* was 75, of which 11 were cases of small-pox, one terminating fatally. The admission rate for small-pox was ·3 and the death rate ·02 per 1,000, against ·6 and ·07 in the previous year, and 1·1 and ·11 the average ratios of the preceding five years respectively. There were 4 cases at Agra, 3 at Delhi, 2 at Cawnpore, 1 at Meerut, and 1 fatal at Bareilly.

In the fatal case the disease is said to have been of a most virulent confluent type. It is stated that no cases were reported in cantonments or neighbourhood at the time of its occurrence. At the other stations named the disease was generally of a mild type and was more or less prevalent among the native population. There were 24 cases of epidemic rose rash, all of which occurred at Fyzabad, during October and November; the outbreak, which was of a very mild type, being almost entirely confined to the officers and men of the 46th Field Battery, Royal Artillery. Of 21 cases of dengue (against 2 and 1 death in 1890) 17 happened at Benares and 4 at Allahabad, all during the latter part of the year and were of a mild type. At Benares the Medical Officer in charge states that the most marked characteristic of the outbreak was the number of men who suffered from inflammation of lymph glands of the groin as a secondary complication. The disease was epidemic amongst the natives in the city. There were 13 cases of measles, which occurred as follows: Ranikhet 8, Calcutta 2, Benares 1, Shahjehanpur 1, and Rawal Pindi 1. The remaining admissions for eruptive fevers were 4 of chicken-pox and 2 of cow-pox.

Enteric Fever.—This disease caused 998 admissions into hospital and 268 deaths, with an average constantly sick of 158·36 men, being in the ratios of 24·8, 6·67, and 3·94 per 1,000 respectively, all fractionally higher than the corresponding rates of the preceding year, and higher than the similar average ratios of the preceding five years by 4·7, 1·30, and 1·21 per 1,000 severally. The per-centage of mortality to attack was 26·8, against 26·0 in the preceding year, and 26·8 the quinquennial average.

In Abstract XVIII. the occurrence of enteric fever at each station and in each quarter of the year is shown. The greatest number of cases and deaths appears in this instance to have taken place in the second quarter, next in the third and fourth, and the least in the first quarter. In 1890, on the other hand, the third quarter had the highest number of cases, followed by the fourth, the second, and the first quarters. The per-centage of mortality to attack was highest, 31·8, in the second quarter, next, 30·5, in the third, 18·1 in the fourth, and 17·1 in the first; in the preceding year the second and third quarters held the same position, but the per-centage in the first was greater than in the fourth quarter.

The disease prevailed to some extent in every district in the Command. The highest ratio of admission was 39·6 per 1,000 in the Oudh district, which is an increase of 17·0 per 1,000 on the previous year; this is closely followed by 38·6, an increase of 7·2, in the Rawal Pindi district, and 37·6 per 1,000 in the Peshawar district, against 4·2 per 1,000. The lowest ratio is again shown by the Presidency district, 9·4 per 1,000, but it is nearly two and half times its ratio of 1890; while the next lowest, 9·7 per 1,000, occurs in the Quetta district, against 22·2 per 1,000 last year; Nerbudda comes next with 12·9 per 1,000, a decline of 5·7 per 1,000 from the previous year. The Rohilkhand district, which has had the highest admission rate from this cause during the past three years, shows a remarkable fall from 55·7 in the preceding year to the comparatively low ratio of 29·1 per 1,000; another noteworthy instance of decrease being in the Bundelkhand district, from 35·5 to 21·4 per 1,000. The mortality ratio was highest in the Peshawar district, 11·98 per 1,000, against only ·76 in the preceding year; the next being 9·46 per 1,000 in the Nerbudda district, more than three and a half times the previous year's ratio; followed by 9·36 per 1,000 in the Rawal Pindi district, an increase of 2·43; and 9·23 in the Meerut district, which is fractionally lower than last year's ratio. The Oudh district with a ratio of 7·96 per 1,000 shows an increase of 2·71 over the previous year. The lowest death rate was 1·84 in the Quetta district, a decrease of ·63; the next being 2·52 in Bundelkhand, against 11·26 per 1,000

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in the preceding year. As in the admission ratio the Rohilkhand district (which had the highest death rate last year) shows an equally notable fall in its death ratio. The Allahabad district also shows a death rate equal to less than half that of 1890.

Taking individual stations the greatest number of cases was furnished by the troops at Lucknow, amounting to 126, of which 20 proved fatal, against 76 and 15 deaths in 1890, and 111 and 16 the year before. Of these 42 cases and 11 deaths occurred in the second quarter (chiefly in April and May), 42 with 2 deaths in the first quarter (mostly in March), 27 and 3 deaths in the fourth quarter (chiefly in December), and 15 with 4 deaths in the third quarter (chiefly in July). In this connexion the medical officer in charge remarks: "It will again be observed that there is a diminution during the "monsoon, which this year was unusually late (the first rain did not fall till "4th July). It is a fair point for discussion whether we may consider the "diminution as an effect of the monsoon or not." Seventy-eight of the 126 cases occurred in men of 24 years of age and under, while 77 of them were in men with less than two years' Indian service. No fewer than 72 of the cases were furnished by the 2nd Battalion Royal Irish Regiment, and the medical officer remarks that "the history of the occurrence is interesting and in-"structive. The depôt arrived on the 5th November 1890, but the head-"quarters and bulk of the regiment did not arrive till 3rd March 1891. A "case was admitted in November 1890, probably contracted on the way. "Then this year in January 3 cases, and in February 1 case. These must "be considered as engendered in Lucknow. The patients were young, one "being a boy of 17 and the eldest 23 years. Of the 25 cases in March, 9 "were admitted within five days of their arrival, so that the route march "must be held accountable. There was then a lull for eight days, but on "the 16th March a case was admitted, this being the commencement of a "series of 50 cases, the last of which was admitted on the 19th May, *i.e.*, 50 "cases in 66 days . . . . There was now another lull, no fresh admis-"sion occurring till 11th June, and from that date till the end of the year the "regiment furnished only 9 cases, showing that 'acclimatization' began to "have its effect." Analysing the 50 cases referred to it would appear that 23 of them occurred in men of 24 years of age and under, 20 in those of 27 years and below, and 7 in men over 27 years of age; while by length of Indian service 2 were in men in their first, 17 were in their second, 2 in their third, and 4 in the fourth year of service, the remaining 25 being in men of over four years' service. The 16th Lancers furnished 21 cases, this regiment of young soldiers arrived from England early in October 1890, between which date and the end of the year it had 24 admissions. At Rawal Pindi there were 116 cases and 31 deaths, as compared with 65 and 13 in the previous year, the largest numbers occurring in the middle of the year, viz., June, 58 with 14 deaths, and July, 30 with 5 deaths, while the corps furnishing the greatest number were the Bedfordshire Regiment, 56 with 18 deaths, and the Royal Artillery, 23 with 7 deaths. Eighty-one of the cases and 21 of the deaths were in men under 24 years of age, 78 with24 deaths in men in their first year of Indian service. The cases were, generally speaking, severe. At Meerut there were 61 cases with 16 deaths, against 64 and 20 in the preceding year; of these 17 occurred in May, 17 in October, 8 in November, and 7 in September. Fifty-three cases were in men of 24 years of age and under, while 26 were of men in their first year of Indian service, and 15 in their second. The medical officer in charge remarks that "some barracks furnished several cases but "these were very large buildings. In a few cases the localisation was marked, "but we failed to define any connexion between the place and the poison." At Bareilly, which last year had 98 cases with 25 deaths, there were only 56 cases with 11 deaths, of which 31 and 4 were furnished by the 1st Battalion Hampshire Regiment, and 14 and 4 deaths by the 22nd Field Battery Royal Artillery. Sixteen cases occurred in December, 12 in May, 7 in April, and 4 in June; 39 cases with 7 deaths were in men of 24 years or under, while 33 with 5 deaths occurred in men in the first year of service. "The numerous cases in "December occurred in four companies of the 1st Battalion Hampshire Regi-"ment, which had proceeded on field service to Ranipur, and returned to "Bareilly only in December. As the disease had not been prevalent in camp "at Ranipur it is conjectured that the outbreak was owing to an impure

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" water supply, obtained by the troops on the march back to Bareilly. The *Bengal.*
" numbers admitted during April, May, and June were larger than during the
" other months, but at this season when the ground water is at its lowest
" level is the time at which we should expect to find enteric fever most preva-
" lent." At Cherat the number of cases amounted to 53 with 15 deaths, against a single fatal case in the preceding year; of these 15 cases occurred in May, 6 in June, 3 in July, 21 in August, and 8 in September. The medical officer in charge reports that "the disease was undoubtedly imported by the " detachment, Northumberland Fusiliers, which furunished cases a few days " after arrival, and within a month 12 of their number had been admitted " suffering from the disease." All but 6 of the cases occurred in men of 24 years of age or under, while 37 were in their first year of Indian service. At Sialkot there were 46 admissions and 8 deaths, against 81 and 15 last year. Ten of the cases occurred in November, 8 in May, 8 in June, and 6 in July. Twenty-one were in the Cavalry regiment, 17 in the Manchester regiment, and 6 in the H Battery, Royal Horse Artillery. There were 28 admissions and 11 deaths at Peshawar, against 4 cases and 1 death in the previous year. The disease commenced, it is stated, at the end of March, but from the beginning of May, soon after the arrival of the Northumberland Fusiliers, it assumed a virulent form up to the end of July, as out of 14 admissions 9 deaths are recorded. From the month of August the cases admitted were milder and with one exception all recovered. The cause of the outbreak is uncertain, the Northumberland Fusiliers lately arrived from Hoti Mardan had the greatest number of deaths, out of 9 admissions from this corps there are 7 deaths recorded. Twenty-three of the cases were in men of 24 years and under, 8 were in their first year of Indian service, and 11 in their second. At Gharial there were 28 cases with 9 deaths, against only 2 and 1 in the year before. Soon after the arrival of the six companies of the 1st Battalion King's Royal Rifle Corps from field service, at Miranzai, on 1st June, several cases were admitted, 17 of the 28 were in men who had just returned from field service, or who had shortly before being attacked marched from Rawal Pindi, where the disease was prevalent. The men of the battalion were very young and had only been in India a few months; excepting three, all the cases were in men of 24 years of age or under, and all, without exception, were in their first year of service. At Umballa there were 26 cases with 10 deaths, against 27 and 8 in the previous year; 10 with 2 deaths occurred in the first quarter, 7 and 4 deaths in the second, 6 and 4 in the fourth, only 3 cases and no death in the third. Sixteen were in men of 24 years of age and under, while 7 were in their first year of service in India, and 9 in their second. The medical officer in charge remarks, "That youth and recent arrival do not seem to have " diminished the chance of recovery, there being no deaths under 21 or with " less than one year's service." There were 23 admissions and 6 deaths at Chakrata, against 44 and 13 in 1890; 13 with 3 deaths occurring in the second, and 9 and 3 deaths in the third quarter. This improvement is, in the medical officer's opinion, due in a great measure to the more careful supervision exercised over the camping grounds between Saharunpore and Chakrata, with special reference to the water supply. Seventeen of the cases occurred in men of 24 years of age and under, while 11 were in men in their first, and 8 in those in their second year of Indian service. Agra also shows a notable decline from 45 cases and 16 deaths in 1890 to 23 and 1 in the present year; 9 having occurred in the fourth, 7 in the third, and 6, with the fatal case, in the second quarter. The men attacked were all young and most of them a very short time in India; and the cases generally were mild. At Allahabad there were 22 cases with 4 deaths, against 25 and 10, all under 24 years of age, and three-fourths in their first year of service in India. At Quetta there were 21 cases and 4 deaths, against 45 and 5 in the preceding year. It is stated that "the greatly improved water supply may account for " this difference to a great extent, but probably a considerable number of cases " were returned as 'remittent' and 'simple continued fevers,' which more " properly should have been shown as enteric. The cases returned were of a " severe type." Thirteen of the men were of 24 years of age or under, and 12 in their first year of Indian service. Dalhousie had 20 admissions and 12 deaths, against 9 and 1 the year before. The medical officer in charge reports that "there was a bad outbreak of enteric fever on the arrival of the troops

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" from the plains. Cases continued to occur until 1st September. The disease " was of a virulent type." All but 2 of the cases with 1 death were of men of 24 years of age and under, while 12 with 7 deaths were among men in their first year of Indian service. At Muttra there were 20 cases with 6 deaths, against 9 and 3 only last year; of these 7 in the King's Dragoon Guards were contracted at the station, the remaining 13 in the 18th Hussars were, in the medical officer's opinion, all imported from Mhow, where the disease was very prevalent in the regiment, or contracted *en route*. At Jullundur there were 18 cases and 8 deaths, against 20 and 6 in the preceding year; at Fyzabad 18 and 4, against 6 and 2; at Cawnpore 17 and 6, against 16 and 11; and at Ranikhet 17 and 5, against 51 and 13 the year before. Of the remaining stations there was an increase as compared with 1890; at Dum Dum from 6 with no death to 15 and 7 deaths, attributed to the water supply and the youth and recent arrival of the men attacked; at Naini Tal, where no cases were recorded in 1890, there were 7 with three deaths; at Sipri 7 cases and 2 deaths, against 2 cases and 1 death, 5 of the cases occurred in July, all of a very severe type, and 2 in September much milder. At Roorkee the cases rose from 5 with no death to 13 and 7 deaths, and although 8 of the men were of 24 years of age and under, two only were in their second year of Indian service. Besides those already mentioned the disease prevailed to a less extent than in 1890 at the following stations:—Dinapore, where there were only 4 cases with 1 death, against 14 and 4; Chaubuttia, where only a single mild case occurred against 18 and 5 deaths; Jhansi, where it fell from 33 cases and 9 deaths to 13 and 2 this year, due probably to increased sanitary precautions; Subathu, from 34 cases and 8 deaths to 7 only and no death; Jutogh, from 13 cases and no death to 7 with 2 deaths; Ferozepore, from 23 cases and 10 deaths to 9 and 2 deaths; and a few other stations that do not need special mention.

Simple Continued Fever.—For this disease there were 1,635 admissions into hospital, and the average number of men constantly sick was 67·91, being in the ratios of 40·7 and 1·69 per 1,000 respectively, the former being 26·2, and the latter ·58 per 1,000 less than the corresponding rates of the preceding year; compared with the quinquennial average the decrease was 36·7 in the admission and 1·0 per 1,000 in the constantly sick rate. There were no deaths under this head. The highest admission ratio was 92·3 in the Meerut district, the next 78·7 per 1,000 was in the Quetta district, there having been 171 cases "generally slight and lasting some 6 or 7 days." The Rawal Pindi district gave the third ratio, 54·9 per 1,000, a small increase on the preceding year. The ratio of the Oudh district, 34·2 per 1,000, was more than double that of the preceding year, the increase occurring at Lucknow (105 cases against 14), owing to the late setting in of the rains and the great heat in consequence in the latter part of June and the whole of July. The lowest admission rate, 1·2, was in the Peshawar district against 95·0 per 1,000 in 1890; the next was in the Bundelkhand district, 8·4 per 1,000, being not far from a third of the previous year's rate. The Presidency district gave a ratio of 9·8 against 127·2 per 1,000 in 1890. The Lahore district gave a rate of 36·2, and Sirhind one of 28·4 per 1,000.

Cholera caused 169 admissions and 113 deaths, the ratios being 4·2 and 2·81 per 1,000, which are higher respectively than those in the preceding year by 3·0 and 1·81 per 1,000, and by 2·2 and 1·44 per 1,000 than the quinquennial average. Abstract XIX. exhibits the stations at which cholera occurred in each of the four quarters of the year. It will be seen that 64 cases, 37 fatal, occurred in the second quarter; 58, with 45 deaths in the third; 46, with 30 deaths in the fourth; and only one case, fatal, in the first quarter. The cases were distributed over 19 stations, the greatest number having occurred at Allahabad, where the disease prevailed in epidemic form in May, and caused 51 attacks and 29 deaths. The disease, it is stated, existed in the neighbourhood for some time before it made its appearance in the station. It first broke out in the Native Infantry lines, and next attacked the warders' quarters and the military prison; it then spread to the British Infantry, who were sent out to Camp Dabhourah, but the Artillery escaped without a case. At Quetta there were 24 cases with 14 deaths, almost entirely confined to the Durham Light Infantry. The disease appeared in the district in the second week of August and disappeared the first week of October; it

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was prevalent in the bazaar and surrounding villages. The disease was of a severe type. At Peshawar there were 20 cases, 13 of which proved fatal. The first case occurred on the 8th September and the last on the 21st October, when it disappeared from among the European troops and declined daily among the native population in the district. At Cawnpore there were 15 cases, all fatal. The disease appeared in an epidemic form early in July, but it had been prevalent in the native bazaars in the city, and in many of the villages within a radius of ten miles from cantonments for some months, gradually extending to the civil lines, where the Europeans were attacked as well as the natives employed in the mills and factories, and passing on to the troops. At Lucknow 15 men were attacked, 9 fatally. The Medical Officer observes that the outbreak resembled that of last year to a certain extent, but cases occurred later, probably owing to the late arrival of the monsoon. At Fyzabad there were 9 cases and 6 deaths—1, fatal, in February; 2, 1 fatal, in May, and 6 with 4 deaths in November. In October, November, and December cholera was extremely prevalent in the city and surrounding villages. At Meerut there were 8 admissions and 6 deaths, all in September, the disease having long been prevalent in the neighbourhood. At Umballa there were 5 cases, 4 of which were fatal—one case occurred in September, 1 in October, and 3 in December. At Benares 3 fatal cases on the 7th and 13th August, and 1st September respectively; and at Meean Meer 3 cases with 1 death. Dinapore and Fort Lahore had each 2 fatal cases, and at Bareilly, Jubbulpore, and Camp Thobba there were two cases and 1 death at each, while Dum Dum, Fort Allahabad, Roorkee, and Rawal Pindi had a fatal case each.

Dysentery.—There were 930 admissions for dysentery and 18 deaths, including 1 of an invalid, being in the ratios of 23·1 and ·45 per 1,000, which are lower respectively by 3·9 and ·30 per 1,000 than the preceding year's ratios, and also less than the quinquennial average by 3·0 and ·22 per 1,000. The number of men constantly sick was 63·09, giving a ratio of 1·57 per 1,000 as against 1·70 in the preceding year, and 1·66 the average of the preceding 5 years. Abstract XX. shows the prevalence of this disease in each military district of the Command, and Abstract XXI. its prevalence in each quarter of the year. The highest admission rate, occurring in the Presidency district, was 50·3 per 1,000, which is an increase of 5·8 on the preceding year, when that district held second place in this comparison. The Nerbudda district gave the next ratio, 36·1 per 1,000, being a decrease of 10·0 per 1,000, followed by the Allahabad and Oudh districts with 32·3 and 32·1 respectively, the former being a rise of 11·1, and the latter a decline of 12·0 per 1,000 as compared with 1890. The ratio of the Rohilkhand district was 24·7, being a fall of 19·4 per 1,000, while that of Bundelkhand was considerably less than half its last year's ratio. The lowest ratio was 11·6 in the Peshawar district, which held the same position the year before; the next lowest being Meerut, with 16·0 per 1,000, less by 4·8 than the preceding year's rate. The highest mortality ratio was 1·72 per 1·000 in the Nerbudda district, this being nearly double the previous year's ratio; the next was 1·40 in the Oudh district, a slight advance of ·09; and 1·13 per 1,000 in the Presidency district, or somewhat more than three times its ratio of the year before. There was no mortality from this disease in the Allahabad, Sirhind, Peshawar, or Quetta districts, and the Rawal Pindi district had the low death rate of ·18 per 1,000, almost half that of 1890. Comparing the four quarters of the year as to the seasonal prevalence of the disease, the highest admission ratio, 8·4 per 1,000, is met with in the fourth, followed in order by the third with 5·9 per 1,000, the second with 5·5, and the first quarter with 3·3 per 1,000. This was also the sequence of the quarters last year. Mortality was highest in the fourth, ·27, then in the third, ·10, and next in the second quarter, ·05 per 1·000, no death having occurred in the first.

The "*Other Diseases*" of this sub-group included 238 admissions for influenza with 1 death, 13 cases of mumps, and 2 of diphtheria, making a total of 253 cases, 1 fatal, the equivalent ratios being 6·3 and ·02 per 1,000 respectively, against 32·0 and ·02 per 1,000 in the preceding year, when the cases of influenza alone amounted to 1,300. The highest ratio of prevalence was 17·7 per 1,000 in the Lahore district, due chiefly to an epidemic of influenza at Dalhousie in June and July, which is said to have been of a mild type.

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The disease was also prevalent at Meean Meer during December. The next rate was in the Quetta district, 16·1 against 19·7 per 1,000 in the preceding year, followed by 15·2 per 1,000 in the 'Rawal Pindi district. Influenza prevailed to a more or less extent at Rawal Pindi, Murree, and Gharial, one case proving fatal at Rawal Pindi. The Allahabad and Rohilkhand districts had no cases of sickness under this sub-group, and the others ranged from ·2 per 1,000 in the Oudh to 5·0 per 1,000 in the Peshawar district.

Malarial Fevers.—Under this head are included 14,840 admissions and 4 deaths due to ague, 286 cases of remittent fever with 16 deaths, and 178 cases of malarial cachexia and 3 deaths, making a total of 15,304 admissions and 23 deaths, with an average constantly sick of 495·47 men from these causes. The ratio of admissions was therefore 380·7 per 1,000, that of mortality ·57, and of constantly sick 12·34 per 1,000. The admission rate was 29·8 per 1,000, lower than that of the preceding year, and 13·9 per 1,000 than that of the quinquennial average; the death rate exceeded that of 1890 by ·18 and the average of the preceding 5 years by ·02 per 1,000, while the constantly sick rate was higher by ·36 and 1·41 per 1,000 respectively in the two comparisons. The greatest ratio of prevalence of these diseases in any district was 746·9 per 1,000 in the Quetta district, which in the preceding year had a ratio of only 243·3 per 1,000, or less than a third. The Nerbudda district, which stood highest last year, comes second with the comparatively low ratio of 565·8, showing a decline of 360·6 per 1,000. The Bundelkhand district stands third with a ratio of 561·2, a notable decrease of 142·2 per 1,000 as compared with the preceding year. The lateness of the rains and the smaller rainfall are referred to as the cause of the improvement in this respect in both the foregoing instances. The Lahore and Presidency districts follow with 557·1 and 525·2 per 1,000 respectively, both being lower than the ratios of 1890. The Rohilkhand district had a ratio of 114·3 per 1,000, the lowest of the year, the next above being Sirhind with 170·8, a decrease of 72·4 per 1,000, then Oudh with 235·0 per 1,000, which, however, exceeds its previous year's ratio by 72·4 per 1,000. These three districts had the lowest ratios in the preceding year also. The Allahabad district with a ratio of 408·0 per 1,000 shows an excess of 128·0 over that of 1890. Marked decreases (besides those already mentioned) occur in the Meerut district, 203·8, and in the Peshawar district 212·7 per 1,000. Of the 23 deaths, 9 occurred in the Rawal Pindi district, 6 in the Lahore district, 2 in the Bundelkhand district, 2 in the Presidency district, and one each in the Oudh, Meerut, and Sirhind districts.

Septic Diseases.—There were 52 admissions and 5 deaths, including 48 cases, 2 fatal, of erysipelas; 2 cases, both fatal, of septicæmia, a fatal case of pyæmia, and a case of sloughing phagedæna. The ratio of admission was 1·3 against 3·0 per 1,000 in the preceding year and 1·9 per 1,000, the quinquennial average, and that of mortality ·12, as against ·15 and ·10 per 1,000 respectively, as compared with those two periods. The Rawal Pindi district as in the previous year had the largest number of cases, viz., 15, with 1 death; the Meerut district 8 and 1 death; Lahore district 7, with no death; Peshawar district 5 and no death; Rohilkhand 4 and 1 death; the remainder being contributed by other districts.

Venereal Diseases.—For *primary syphilis* alone there were 3,458 admissions into hospital, equivalent to a ratio of 86·0 per 1,000, but this is lower by 20·4 than in the preceding year, and by 13·0 per 1,000 than the quinquennial average ratio. The number of men constantly sick from this cause amounted to 305·63, being in the ratio of 7·60 per 1,000, which is also lower than the year before by 1·78, and fractionally below that of the average of the preceding five years. For simple venereal ulcers in addition there were 2,737 admissions, and 192·88 men were constantly sick, making a total of 6,195 admissions for primary venereal sores, with 498·41 men constantly sick, giving an admission rate of 154·1 per 1,000, a decline of 66·8 from that in the year 1890, and of 28·2 from the 5 years' average; the constantly sick rate was 12·40 per 1,000, a decrease of 5·32 and ·83 respectively in the two comparisons. The admissions for *secondary syphilis* were 2,354; 3 deaths were recorded, including that of an invalid, and there were 244·00 men constantly sick. The admission ratio, 58·6 per 1,000, was lower by 1·6 per 1,000. The ratio of mortality, ·07 per 1,000, showed no change, while the constantly sick rate, 6·07, was greater by ·22 per 1,000 than in the preceding year. Compared

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with the average of the preceding 5 years, the ratio of admission was 17·8 per 1,000 higher, that of mortality ·02 lower, while that of constantly sick was 2·29 per 1,000 in excess. *Gonorrhœa* furnished 6,400 admissions, or a ratio of 159·2 per 1,000, with an average constantly sick of 461·27 men, equal to a rate of 11·47 per 1,000. Here, also, a decline is noticed, viz., of 25·5 per 1,000 in the admission and of 1·83 per 1,000 in the constantly sick rates, as compared with 1890, and of 14·4 and ·55 per 1,000 respectively as compared with the quinquennial average. Taking all these forms of venereal diseases together, the ratio of admission amounts to 371·9 per 1,000, which is less than that of the preceding year by 93·9 per 1,000 and by 24·8 per 1,000 than the five years' average; while for constantly sick the ratio was 29·94 per 1,000, representing a loss of 1203·68 men to the efficient strength of the force from these diseases. This ratio was, however, less by 6·93 per 1,000 than that of the year before, but it was ·91 per 1,000 greater than the quinquennial average. It must be noted here that in addition to those just referred to there were 1,244 admissions, which were also of venereal origin, giving a ratio equal to 30·9 per 1,000, against 40·1 in 1890, and 28·4 the average of the preceding five years; these were chiefly inflammation and suppuration of the lymphatic glands of the groin from venereal infection. The Principal Medical Officer remarks that although the above figures are considerably in favour of the present year, and exhibit an improvement which cannot but be looked upon as satisfactory so far as they go; they nevertheless imply a greater virulence in the constitutional form of the disease. While the admission ratio for secondary syphilis has risen from a quinquennial average (1886–90) of 40·8 to 60·2 in 1890, and 58·6 per 1,000 in the present year, the constantly sick rate has steadily increased from 3·78, the average, and 5·85 in the preceding year to 6·07 per 1,000 in 1891, and the average duration of each case from 33·83 days, the quinquennial average to 35·46 days in 1890, and 37·83 days in the present year. Comparing next the prevalence of the different forms of these diseases in the various districts, as shown in Abstract XVI., the Rohilkhand district shows the highest ratio of admission for primary syphilis, 237·1 per 1,000, exceeding that of the previous year by 65·6 per 1,000; the next being the Presidency district with 159·7 per 1,000, an increase of 22·2, and the Allahabad district with 155·4 per 1,000, an increase of 43·7. The lowest was 19·8 per 1,000 in the Quetta district, next above being 22·3 per 1,000 in the Peshawar district, and 25·7 per 1,000 in the Meerut district, a decline of 6·6. Excepting the Rohilkhand, Allahabad, and Presidency districts, all the others show reduced admission rates, the most important being a fall of 78·5 per 1,000 in the Oudh district, which had the highest ratio last year, a decrease of 64·2 per 1,000 in the Bundelkhand district, one of 53·3 in the Sirhind, and of 51·6 per 1,000 in the Rawal Pindi district. For secondary syphilis the highest ratio of admission was 94·8 per 1,000 in the Allahabad district, an increase of 9·4 on that of 1890; this being closely followed by 93·9 per 1,000 in the Presidency district, an increase of 2·0 per 1,000 on the previous year's ratio. The next were 89·8 in the Bundelkhand and 89·4 in the Nerbudda districts, the former being 1·8 and the latter 9·6 per 1,000 higher than in the year before. The Sirhind district had a ratio of 51·5 per 1,000, a notable increase of 9·7 per 1,000. The lowest ratio, 25·6 per 1,000, occurred in the Peshawar district, a decrease of 5·1; Quetta being the next above with 31·8 per 1,000, and a decrease of 5·7. A marked decrease of 13·7 per 1,000 occurred in Rohilkhand with the ratio of 77·4, and the troops on the march having a ratio of 13·2, shows a fall of 10·9 per 1,000. The two deaths recorded took place in the Rohilkhand and Peshawar districts respectively. The highest ratio of prevalence of gonorrhœa was again in the Allahabad district, 260·4 per 1,000, which was, however, a decline of 23·9 from the previous year; the next being 229·6 in the Nerbudda district, an increase of 7·1; and 229·3 per 1,000 in the Rohilkhand district, a decrease of 37·1 per 1,000. The Quetta and Peshawar districts, as in the previous year, show the lowest rates of prevalence for this disease; the former had a ratio of 67·2 and the latter of 80·5 per 1,000, both lower by over 22·0 per 1,000 than last year. With the exception of Nerbudda and Sirhind, which show a rise of 7·1 and 4·6 respectively, all the districts compare favourably with the preceding year, the most decided fall in the rate of prevalence having occurred in the Rawal Pindi district, 48·7 per 1,000; among troops on the march of 44·0 per

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1,000; in Oudh of 41·9 per 1,000, and Rohilkhand of 37·1 per 1,000. Taking all these various forms of venereal disease together, the highest rate of prevalence, 543·8 per 1,000, is found in the Rohilkhand district, the next below, 510·6, in the Allahabad, and the third, 410·2 per 1,000, in the Presidency district; the lowest being 118·7 in the Quetta district, and the next above, 128·5 and 216·2 per 1,000 in the Peshawar and Meerut districts respectively. In comparison with similar ratios for 1890, increase has occurred in four districts, viz., the Allahabad district, 29·2; Rohilkhand, 14·8, and the Nerbudda and Presidency districts, 11·9 and 11·7 per 1,000 respectively; the ratios of the remaining districts compare favourably with those recorded for the preceding year, the decreases varying from 17·1 and 21·0 in the Lahore and Meerut districts to 99·7 and 122·9 per 1,000 in the Rawal Pindi and Oudh districts.

Hydrophobia.—There were three fatal cases of hydrophobia against one last year. One of these, at Lucknow, admitted and died on the 5th May, the man having been bitten by a dog six weeks previously, when no medical treatment was resorted to as the wound was looked upon as a trivial one; another at Bareilly, admitted and proved fatal, on the 26th day, the patient having been severely bitten on the nose by a dog on 16th August; the wound was cauterised, but healed up very slowly. The third was one of three men bitten by a rabid dog in Amritsar in July; he took no notice of the wound, merely washing it with water, and felt no ill-effect until the day previous to his reporting sick about two months after; he died 30 hours after admission into hospital. Directly the disease was recognised the other men were sent off without delay to Paris to undergo the Pasteur treatment; one has since returned to service in India, the other went to England for duty.

The remaining four admissions under Sub-group V. were cases of splenic fever in the Lahore district.

Parasitic Diseases.—There were 126 admissions, which included 117 for tænia solium, and 6 for tænia mediocanellata, giving a ratio of 3·2 per 1,000 against 2·8 last year, and 3·6 the quinquennial average. The highest ratio was 6·4 per 1,000, occurring in the Rawal Pindi district, and also in the Quetta district; this was closely followed by 6·0 per 1,000 in the Presidency district. The lowest rates occurred in the Rohilkhand district, ·3 per 1,000, and in the Sirhind district ·8 per 1,000.

Scurvy.—There were only five cases of this disease against 19 the year before. Two cases occurred in the Meerut district and one each in the Bundelkhand, Rawal Pindi, and Quetta districts.

Alcoholism.—341 admissions and 1 death are recorded under this head. The cases include 3 of delirium tremens. The admission rate, 8·5 per 1,000, is higher by ·2 than in the preceding year, but less than the quinquennial average by 4·7 per 1,000. The highest rate of prevalence was as much as 67·6 per 1,000 in the Quetta district, this being nearly six times that of the preceding year. Of the 341 total admissions in the Command 147 are returned by that district alone. The next ratio was 11·0 per 1,000 in the Rawal Pindi district. The lowest ratio was in the Lahore district, 1·7, the next above being 2·9 in the Meerut and 3·4 per 1,000 in the Rohilkhand district. The death was due to alcoholism.

Debility, &c.—831 admissions are returned under Group C., of which 830 were for debility. The admission rate, 20·7, is a decrease of 2·0 per 1,000 from the ratio of the preceding year, and of 1·4 from the average of the preceding 5 years. There were 64·15 men constantly inefficient from this cause, in the ratio of 1·60 per 1,000 against 1·55 last year, and 1·45 the quinquennial average. The highest ratio in any district was 46·6 per 1,000 in the Presidency district, this being an increase of 20·1 per 1,000 on the previous year's ratio, due for the most part to climatic causes and the sequence of malarial fevers. The next below was 35·3 per 1,000 in the Lahore district, followed by 23·6 per 1,000 in the Oudh district, both lower by 8·2 and 12·4 respectively than the corresponding ratios of 1890. The lowest was 8·7 per 1,000 in the Quetta district, but this is more than double the previous year's ratio, the next above being 9·9 per 1,000 in the Peshawar district, a decrease of 2·2; and 10·5 in the Rawal Pindi district, a fall of 5·6 per 1,000. Marked improvement is also shown by the Meerut district, the ratio of which has declined from 32·9 in 1890 to 21·9 per 1,000 in the present year.

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Rheumatism.—1,256 admissions are recorded, of which 45 were rheumatic fever, and there were 2 deaths, including one of an invalid. The admission ratio 31·3 per 1,000, and that of mortality ·05 per 1,000, were lower than in 1890 by 1·2 and ·02, and than the quinquennial average by ·5 and ·02 per 1,000 respectively. The number constantly sick was 88·70 men, being in the ratio of 2·21 per 1,000 against 2·19 in 1890, and 2·05 per 1,000 the average rate. The highest rate of prevalence 55·2 per 1,000 was in the Presidency district an increase of 12·9 on the preceding year; the Rawal Pindi district gave the next, 44·6 per 1,000, an increase of 8·4. In Oudh the rate was 39·1 per 1,000, an increase of 11·5; and in Rohilkhand 36·9, an increase of 17·3 per 1,000. The lowest admission rate occurred in the Peshawar district, 14·5 per 1,000, a decline of 8·2; followed by 16·6 in the Quetta district, considerably less than half the ratio of the preceding year. *Bengal.*

Tubercular Diseases caused 114 admissions with 24 deaths, including 8 of invalids, being in the ratios of 2·8 and ·60 per 1,000, against 3·1 and ·83 per 1,000 respectively in the previous year, and 3·5 and ·89 per 1,000, the average corresponding ratios of the preceding five years. All but one of the cases were due to lung affection. Every district furnished cases of the disease, the highest admission rate, 5·9 per 1,000, being in the Bundelkhand district; this was double the ratio of the year before. The Allahabad district had a ratio of 4·1, and Sirhind 4·0 per 1,000, the former being 1·4 higher, and the latter fractionally lower than the respective ratios of the preceding year. The lowest ratio 1·5 is shown by the Meerut district, followed by 1·9 in the Presidency, and 2·0 per 1,000 in Rohilkhand districts. Of the others, the Narbudda district, which had the highest admission rate last year has this year fallen to 2·6 per 1,000, or rather less than half. Of the 16 deaths in the country, 4 occurred in the Sirhind district, 3 in Oudh, 2 each in the Allahabad, Rohilkhand, Bundelkhand, and Rawal Pindi districts, and 1 in the Lahore district. There were no deaths in the Presidency, Narbudda, Meerut, Peshawar, or Quetta districts.

Other diseases of Group D. gave 389 admissions and 4 deaths, equal to the ratios of 9·7 and ·10 per 1,000 respectively, against 7·8 and ·12 per 1,000 last year, and 11·4 and ·15 per 1,000 the average of the preceding 5 years' ratios. The admissions were chiefly for non-malignant new growths; 7 cases were due to malignant disease, and there were 76 admissions for anæmia, 21 for scrofula, 4 for diabetes mellitus, and 2 for purpura. The deaths were from carcinoma 2, and sarcoma and diabetes 1 respectively.

Local Diseases.—*Diseases of the Nervous System.*—393 admissions and 19 deaths are returned. The ratios were 9·7 and ·47 per 1,000, as compared with 8·9 and ·32 per 1,000 in the preceding year, and 11·0 and ·35 per 1,000 respectively, the quinquennial average. Of the total admissions, 66 were cases of mental diseases, equal to a ratio of 1·6 against 1·5 per 1,000 in 1890 and the average of the preceding five years. Every district in the Command had instances of mental disease. The highest ratio, 4·1 per 1,000, was furnished by the Allahabad and Rohilkhand districts. The next rates were 3·4 per 1,000 in the Narbudda and 2·9 in the Peshawar districts. The lowest ratios were ·3 in Sirhind, ·5 in Quetta, and ·6 per 1,000 in the Lahore district. Excluding cases of mental disease, the highest ratio for nervous diseases, 15·0 per 1,000, is shown by the Oudh district, a fractional increase; the next being 10·9 per 1,000 in the Presidency district, an increase of 3·6; and 9·9 per 1,000 in the Lahore district, an increase of 2·7. The lowest ratios were 3·7 per 1,000 in the Peshawar district, a decline of 1·6; 4·1 per 1·000 in the Meerut district, a decrease of 3·0 per 1,000; and 6·4 per 1,000 in Sirhind, a decrease of 2·9, as compared with 1890. The highest rate of mortality occurred in the Nerbudda district, 2·53 per 1,000, as against *nil* in the previous year; next in the Presidency district, 1·50 per 1,000 against ·37, then in the Quetta district, ·92 per 1,000 against *nil* in the previous year. There were no deaths in the Rohilkhand, Bundelkhand, and Peshawar districts. The principal causes of admission were neuralgia 194 cases, epilepsy 34, vertigo 30, megrim 14, and paralysis 13; while the deaths were 13 from inflammation and congestion of the brain or its membranes, 3 from apoplexy, and 1 from abscess of brain, tetanus and cerebral hæmorrhage respectively.

Diseases of the Eye caused 551 admissions, being in the ratio of 13·7 per 1,000, equal to a decrease of ·3 and ·5 per 1,000, as compared with the

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ratio of the previous year and the quinquennial average respectively. The highest rate of prevalence occurred in the Oudh district with a ratio of 27·9 per 1,000, which is 10·3 per 1,000 higher than in the preceding year; the next in order being the Meerut district with 16·3 per 1,000, a fractional increase, and the Presidency district with 15·0 per 1,000, an increase of 5·8. The lowest was 5·1 in the Quetta district, a decrease of 3·3 per 1,000; then 9·2 in the Lahore district, a decrease of 4·1 and 9·8 per 1,000 in the Allahabad district, a decrease of 3·2 from the preceding year's ratio. Conjunctivitis was the principal cause of admission, 391 of the total number of cases being returned under that disease, while of the others 22 were due to ulcer of cornea, 19 to iritis, and 16 to keratitis.

Diseases of other Organs of Special Senses.—These were the cause of 635 admissions with one death, equal to a ratio of 15·8 per 1,000 for the former, which is nearly the same as that of the previous year. The Oudh district again leads with a ratio of 30·0 per 1,000 for these affections, a small increase of 2·4 per 1,000, being followed by the Allahabad district with 27·0 per 1,000, an increase of 10·7; and the Presidency district with 26·3 per 1,000, an increase of 7·9, as compared with 1890. The lowest ratios were 3·8 per 1,000 in the Sirhind district, not far from half the previous year's rate; 6·4 per 1,000 in Quetta, a decrease of 5·0 per 1,000; and 10·7 per 1,000 in the Peshawar district, less than half the previous year's ratio. Of the 635 cases included under this head, 20 were affections of the nose, the rest being aural diseases, chiefly affecting the external meatus. The fatal case was one of suppurative inflammation of tympanum.

Diseases of the Circulatory System caused 516 admissions and 15 deaths, equal to ratios of 12·8 and ·37 per 1,000, which are higher then the corresponding ratios of the previous year by 1·1 and ·05, and than the average rates of the preceding five years by ·5 and ·01 respectively. 58·68 men were constantly sick from these affections, being in the ratio of 1·46 per 1,000, against 1·25 and 1·19 per 1,000 in the two comparisons. The highest admission rate was 26·7 per 1,000 in the Presidency district, this being an increase of 3·2 on the previous year's ratio; the next ratio was 20·4 in the Meerut district, a decline of 1·2 per 1,000; then 16·6 per 1,000 in the Oudh district, being a fall of 3·1 from the preceding year's rate. The lowest admission ratio was 3·7 per 1,000 in the Quetta district, a decrease of 1·7; the next above being 7·1 in Bundelkhand, an increase of 2·1 per 1,000; then 8·3 in the Peshawar district, an increase of 2·2 per 1,000. Seven districts show increased ratios, as compared with the previous year, the most notable being a rise of 6·3 per 1,000 in the Lahore district. Bundelkhand had the highest rate of mortality, ·84 per 1,000, exactly double that of the year before; the Peshawar district follows closely with ·83 per 1,000, rather more than double the previous year's death rate; and Rohilkhand comes third with ·68 per 1,000 against no deaths in 1890. There was no mortality in the Presidency, Narbudda, or Meerut districts, and Oudh had a death rate of ·23 per 1,000, which is less than half that of the preceding year. The principal causes of admission were palpitation 381 cases, valvular disease of the heart 69, and varix 26; and the deaths were due to fatty degeneration of the heart 8, valvular disease 4, dilatation of the heart 1, aneurysm of the heart 1, and aneurysm of aorta 1.

Diseases of the Respiratory System were the cause of 1,523 admissions and 36 deaths, including those of 2 invalids, giving the ratios of 37·9 and ·90 per 1,000 respectively. The former was lower by 8·5 than the ratio of the preceding year, and by 1·4 per 1,000 than the quinquennial average, while the latter was not far from one half the death-rate of 1890, and less by ·20 per 1,000 than the average. The constant number of men inefficient from these affections was 86·35, being in the ratio of 2·15 per 1,000, against 2·77 and 2·32 per 1,000 respectively in the two comparisons. The highest rate of prevalence in any district, 90·7 per 1,000, was, as in the previous year, in Quetta, a fractional decrease from that of the preceding year; next in order being 65·0 per 1,000 in the Presidency district, an increase of 4·3; 47·6 in the Rawal Pindi district, this being a decline of 20·8 per 1,000; and 45·4 per 1,000 in the Lahore district, a decrease of 5·9. The lowest ratio of admissions, 12·9 per 1,000 occurred in the Narbudda district, rather more than a third of the previous year's ratio; next 19·3 per 1,000 in the Rohilkhand district, somewhat over half that of 1890, and 24·9 per 1,000 in the Allahabad district, a

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decrease of 15·7 per 1,000. As in the previous year the highest ratio of mortality, 1·70 per 1,000, is shown by the Meerut district; this was, however, little more than half of the preceding year's death-rate; the next was 1.38 per 1,000 in Quetta, against 1·48; 1·13 per 1,000 in the Presidency district, against 1·84, and 1·10 per 1,000 in the Rawal Pindi district, against 2·77 in 1890. There were no deaths in either the Narbudda or Peshawar districts, and the death-rates in all the others were lower than in the preceding year. Of the 1,523 admissions during the year, 1,282 were due to bronchitis, 113 to pneumonia, 64 to pleurisy, and 27 to pneumonic phthisis, while of the 34 deaths in the country, 21 were from pneumonia, 9 from pneumonic phthisis, 2 from pleurisy, and one each from laryngitis and bronchitis. The deaths of invalids were one from pneumonia, and one from pneumonic phthisis. *Bengal.*

Diseases of the Digestive System caused 5,312 admissions into hospital and 61 deaths, including 3 of invalids, the ratios were therefore 132·1 per 1,000 for the former and 1·52 per 1,000 for the latter as compared with 131·0 per 1,000 and 1·75 per 1,000 in the preceding year, and 145·5 and 1·73 per 1,000, the quinquennial averages respectively. There were 231·22 men constantly inefficient from these affections, being in the ratio of 5·75 against 5·57 and 5·76 per 1,000 respectively in the two comparisons. The ratio of prevalence was highest in the Presidency district, 171·3 per 1,000, which exceeded that of the preceding year by 51·8 per 1,000; the next ratios were in the Oudh and Lahore districts, 157·1 and 154·1 per 1,000 respectively, these being slightly higher than in 1890. The lowest ratio, 63·6 per 1,000 in the Peshawar district, is lower by 34·5 than the corresponding rate in the previous year. The next above, 90·1 per 1,000 in the Sirhind district, and 101·5 per 1,000 in Narbudda district, were also lower by 21·7 and 25·3 respectively. The mortality ratio was highest in the Presidency district, 3·76 per 1,000, an increase of ·45 on that of the preceding year. The rate in the Narbudda district, 3·44 per 1,000, nearly double the previous year's rate was second, and 2·19 per 1,000 in the Meerut district third, a fractional increase on the rate in 1890. The lowest mortality rate was ·41 per 1,000 in the Peshawar district, against *nil* in 1890; the next above ·42 per 1,000 in the Lahore district is rather over a fifth of the previous year's death ratio, and ·92 per 1,000 in the Rawal Pindi district, a slight decrease from last year's ratio. The principal causes of admission were affections of the mouth and throat 1,540 cases, diarrhœa 1,394, dyspepsia 660, and hepatic disorders 980 (including 350 cases of congestion of the liver, 333 of hepatitis, 225 of jaundice, and 54 of hepatic abscess). The deaths comprised 40 from hepatic abscess, 21 of which were associated with dysentery, 3 from diarrhœa, 3 from typhlitis, 3 from peritonitis, 2 each from enteritis, intestinal strangulation, and hepatitis, and one each from inflammation of stomach, perforation of intestines, and inflammation of hepatic ducts, and gall bladder respectively. Abstract XX. exhibits the prevalence of and mortality from dysentery, diarrhœa, and hepatic diseases in the several districts of the Command, and Abstract XXI. the prevalence of and mortality from these diseases in each of the quarters of the year. The statistics as regards dysentery have already been touched upon. The ratio of admissions for diarrhœa was 34·7 per 1,000 against 32·9 in the preceding year, and the mortality ratio ·07 against ·05 per 1,000. The greatest prevalence was in the Presidency district, which had a ratio of 51·5 per 1,000 against 27·9 per 1,000 in 1890; the next highest ratio was 46·2 per 1,000 in the Lahore district, against 42·3 per 1,000; the third being 41·7 per 1,000 in the Rawal Pindi district, closely followed by 41·2 per 1,000 in Oudh, both of which are higher by 9·8 and 5·2 respectively than the corresponding ratios of the year before. The Peshawar district gave the lowest ratio 13·2 as compared with 13·6 per 1,000 in 1890. The greatest decrease occurred in the Sirhind district, which had a ratio of 23·6 against 34·3 per 1,000 in the previous year. The deaths took place in the Oudh, Bundelkhand, and Rawal Pindi districts respectively. The prevalence of this disease was as usual greatest in the third quarter of the year when the admission rate was 11·4 per 1,000, the next being 9·8 per 1,000 in the second, 8·9 per 1,000 in the fourth, and 4·6 per 1,000 in the first quarter. In the preceding year the sequence differed somewhat, the second and fourth quarters being in reverse order. The fatal cases occurred, 2 in the first and one in the fourth quarter. The ratio of admissions for hepatic diseases was 18·4 per 1,000, and that of mortality 1·04 per 1,000, as compared with 20·1

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and 1·24 per 1,000 respectively in the preceding year. The rate of prevalence was highest in the Presidency district, 38·3 per 1,000, higher by as much as 16·2 than the ratio of the previous year. The rate for Quetta was 28·1 per 1,000, a considerable increase, while the only other increase worth noting occurred in the Rawal Pindi district, the ratio of which 16·2 per 1,000 was higher by 5·1. The lowest ratio for admission was again in the Peshawar district, 2·5 per 1,000, this being, moreover, less than half that of the preceding year, while six other districts show reduced ratios as compared with 1890, the most marked being that in the Rohilkhand district, which fell to 20·6 per 1,000; the Oudh district, which stood second last year with 33·4, furnishes now only a ratio of 21·5 per 1,000, and the Bundelkhand district, which was third in the preceding year, presents a ratio of only 21·0 per 1,000, a decrease of 10·7. The ratio of mortality was highest in the Presidency district, 2·63 per 1,000 against 2·57 in the preceding year; the second being 1·94 per 1,000 in the Meerut district against ·79 in 1890; the third 1·84 per 1,000 in the Quetta district against 1·97. The lowest death-rate, ·41 per 1,000, occurred in the Peshawar district, which had no mortality last year, being closely followed by ·42 in the Lahore district against 1·48 per 1,000 in the preceding year. Seven districts had ratios lower than in the year before, the decrease varying from ·03 in the Narbudda district to 1·14 per 1,000 in Oudh. With regard to the seasonal prevalence of these disorders the highest admission ratio occurred in the third quarter of the year, 5·2 per 1,000, which is closely followed by 5·1 per 1,000 in the second, the fourth coming next with 4·3, and the first quarter lowest with 3·8 per 1,000. The sequence of the quarters differed from that observed in the preceding year, when the fourth had the greatest rate of prevalence, the third, second, and first quarters following in order. Mortality was greatest in the first quarter, ·30 per 1,000, next in the third ·29 per 1,000, then ·25 in the fourth, and lowest ·20 per 1,000 in the second quarter. In the previous year the fourth quarter stood highest, followed respectively by the third, first, and second quarters.

Diseases of the Lymphatic and Glandular System.—1,325 admissions with one death are returned, the admission rate being 33·0 per 1,000, which is a decline of 8·0 per 1,000 from that of 1890, but an increase of 6·6 per 1,000 as compared with the quinquennial average. The death ratio, ·02 per 1,000, was the same in the two years, and was also identical with the average of the preceding five years. The number constantly inefficient was 147·54 men, being in the ratio of 3·67 per 1,000, against 4·06 and 2·52 per 1,000 respectively in the two comparisons. The admission ratio was highest in the Narbudda district, 61·0 per 1,000, which is slightly higher than the ratio of last year, while in the Allahabad district the ratio was 53·1 per 1,000, a decline of 17·1. The third was 51·7 per 1,000 in Rohilkhand district, against 28·6 in 1890. The lowest ratio occurred in the Quetta district, 8·3 per 1,000, which is just over half that of the year before; the next being 13·6 in the Peshawar district, against 36·0 per 1,000 in 1890. The ratios of the Bundelkhand and Rawal Pindi districts, 18·5 and 18·9 per 1,000, were less than half the rates in the preceding year. Of the 1,325 admissions 1,188 were due to inflammation and suppuration of lymph glands, mostly of the groin; and 118 were cases of splenic disease, the fatal case recorded being one of induration and enlargement of the spleen from ague.

Diseases of the Urinary System.—There were 84 admissions and 7 deaths, the admission rate was 2·1 per 1,000, and the death rate ·17 per 1,000, as compared with 1·7 and ·05 per 1,000 respectively in the preceding year. The average corresponding ratios of the preceding five years were 2·1 and ·14 per 1,000 respectively. The highest ratio of admission, 5·2 per 1,000, was in the Narbudda district, and was half as much again as in 1890; the next, 3·2 per 1,000, was in Sirhind, and then 2·9 per 1,000 in Bundelkhand. The lowest, ·4, in the Peshawar district and ·9 per 1,000 in Oudh, were much below the respective ratios in 1890. The admissions were chiefly from nephritis, 26 cases, 5 of which proved fatal, incontinence of urine 18 cases, inflammation of the bladder 11 cases, hæmaturia 5, and granular kidney 4, two fatal.

Diseases of the Generative System.—The admissions for these affections amounted to 3,295, equalling a ratio of 82·0 per 1,000, as compared with 130·2 in the preceding year, and 101·7 per 1,000 the average of the preceding five years. 227·50 men were constantly non-effective, giving a ratio of 5·66 per

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1,000, as compared with 9·23 in 1890 and 6·55 per 1,000 the quinquennial average. The Narbudda district had the highest ratio of admission, 207·2 per 1,000, but this was a decline of 6·5 from that of the previous year; the Allahabad district gave the next, 135·7 per 1,000, a decrease of 75·3; and the Meerut district the third, 122·7 per 1,000, a fall of 69·8. The lowest rate of prevalence was 38·7 per 1,000 in the Presidency district, below the previous year's ratio by 57·3; the next above being 58·3 per 1,000 in Oudh, a decrease of 16·3. Of the 3,295 admissions no fewer than 2,737 were from simple venereal ulcer, while 348 were from orchitis, and 65 from stricture of the urethra. There was no mortality under this head.

Diseases of the Organs of Locomotion.—There were 342 admissions, being in the ratio of 8·5 per 1,000, an increase of 1·8 on the preceding year, and of 1·5 per 1,000 on the five years' average. The admission rates of the several districts ranged from 1·7 in the Bundelkhand and 3·4 per 1,000 in the Narbudda districts to 10·5 in Sirhind and 12·1 per 1,000 in the Meerut district. All but four of the districts show a greater rate of prevalence, the ratios of the Sirhind, Lahore, and Rohilkhand districts being much above the ratios of the preceding year. Nearly two-thirds of the number of admissions under this head were due to synovitis.

Diseases of the Connective Tissue.—There were 918 admissions from these diseases, one of which, a case of pelvic abscess, ended fatally. The admission ratio, 22·8 per 1,000, shows an increase of 2·3 on the preceding year, the death rate was ·02 against *nil* in 1890. Compared with the quinquennial average the increase was 1·5 and ·01 per 1,000 respectively. The highest admission ratio was 37·3 in the Bundelkhand district, followed by 33·9 per 1,000 in Oudh; and the lowest, 13·3 per 1,000, in the Quetta district, Sirhind being next above with 14·5 per 1,000. Excepting four, all the districts had higher ratios than in the preceding year.

Diseases of the Skin.—The admissions amounted to 2,756, chiefly from boils, ulcers, whitlow, eczema, ringworm, and itch, which together caused more than seven-eighths of the admissions. The ratio of admissions was 68·6 per 1,000, which is an increase of 7·3 on that of the previous year, but only fractionally higher than the quinquennial average rate. The number constantly sick was 107·92 men, being in the ratio of 2·68, as compared with 2·53 in 1890 and 2·77 per 1,000, the average of the preceding five years. The Oudh district gave the highest rate of prevalence for these diseases, and the ratio, 124·3 per 1,000, shows an excess of 33·9 over that of the preceding year, while the next highest, 103·2 per 1,000 in Bundelkhand, exceeds the ratio of that district in the previous year by 34·8. The Allahabad district, which comes third with 96·9 per 1,000, had an increase of 16·4. The lowest ratio was in the Peshawar district, 36·3 per 1,000, which is little more than half its preceding year's admission rate; the next being 39·1 in the Quetta district, slightly higher than in 1890.

Poisons.—26 cases, 3 fatal, are recorded against 6 with 3 deaths in 1890. Of these 5 were cases of alcoholic poisoning, 1 of poisoning by oxalic acid (attempt at suicide), 1 by carbolic acid (fatal and suicidal), and 1 by fish (fatal); 1 was a case of snake bite, 2 were cases of dog bite, 12 of wounds by stinging insects, and 3 of poisoned wounds by animal venom. The third fatal case was a death out of hospital from alcoholic poisoning.

Injuries.—The admission rate was 105·7 and the mortality rate 2·19 per 1,000, as compared with 102·5 and 1·92 per 1,000 in the preceding year, and with 117·4 and 2·30 per 1,000 respectively the corresponding average ratios of the preceding five years. The average number constantly sick from these causes was 184·17, equal to a ratio of 4·58 per 1,000, which is lower by ·08 and ·43 per 1,000 respectively in the two comparisons. The number of admissions for general injuries was 182 and the deaths amounted to 60, against 96 and 44 in preceding year. The admissions included 141 cases of heat apoplexy, 17 of sunstroke, 8 of burns and scalds, 5 of exhaustion, 4 of multiple injury, 4 of asphyxia from strangulation, 1 of effects of chemical irritants and corrosives, 1 of asphyxia from submersion, and 1 of asphyxia from plugging of air passages. The 60 deaths comprised 32 from heat apoplexy, and 1 from sunstroke, 17 from drowning (one suicidal and one case in which an open verdict was returned), 4 from hanging, all suicidal, 2 from plugging of air passages by foreign substances, 2 from multiple injury, 1 from asphyxia from compression

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of chest, and 1 from exhaustion from the effects of cold. The largest number of cases of heat apoplexy and sunstroke occurred at Lucknow, 14 with 4 deaths. At Bareilly there were 12, 1 fatal. At Peshawar there were 10 cases, 3 fatal; at Rawal Pindi, 9 with 3 deaths; Meean Meer, 9 cases, none proving fatal; in Fort Allahabad 7 cases, all recovered; at Allahabad 7 cases, 2 proving fatal; Agra and Ferozepore 7 with 2 deaths each, and at 25 other stations the number of cases varied from 1 to 6. Four cases of exhaustion occurred in men of a detachment marching up to Gnathong, who had lost their way and were exposed all night to the cold. The case returned under "effects of chemical irritants" occurrred at Meean Meer, and was caused by the bursting a jar of sulphuric acid in the soda water manufactory. For local injuries their were 4,068 admissions and 27 deaths. The principal causes of admission, as usual, being contusions, wounds, sprains, and abrasions, to which together 3,706 were due. Among the rest were 194 cases of fracture, 47 of dislocations, 37 of strains, 32 of gunshot wounds, 20 of burns and scalds, and 11 of concussion of brain. The deaths comprised 9 from gunshot wounds, 3 cases suicidal, and 2 in which an open verdict was returned; 5 from wounds, four suicidal and 1 homicidal; 4 from fractures, two from simple fractures with compression of cord; and one each respectively from contusion, rupture of arteries, rupture and laceration of viscera, compression of the brain, dislocation of spine with fracture, concussion of cord, and laceration of cord. In the case of homicide the man died from the effects of a bayonet wound received in a riot at Kailana. There were 13 cases of suicide as compared with 10 in 1890, 4 being due to cut-throat, 4 to hanging, 3 to gunshot wound, 1 to drowning, and 1 to poisoning by carbolic acid. In one case discontent with the army and home sickness are assigned as the presumed motive; in another, the man had been bitten by a dog and having a fixed idea that he would die of hydrophobia preferred suicide; in a third disappointment at not being sent home as time-expired, and also at having received bad news from home, are supposed to have been the motive for the act, while a fourth was under the delusion that his family was disgraced at home. In none of the others could any motive be assigned, and in all the verdict of the inquest was that of suicide while labouring under temporary insanity. The ages in three of the cases were 21, 22, and 23 years respectively; four of the men were 24 years of age, one of 25, one of 28, three of 29, and one of 41 years. Two were of 3 years' service, two of 4, one of 5, three of 6, and one each of 7, 8, 9, 12, and 15 years' service respectively. Three cases of doubtful nature, and in which "open" verdicts were given by the courts of inquest are also recorded. Two of these were cases of gunshot wound, and one of drowning. There were also 18 cases of self-inflicted injuries or attempts at suicide, of which 11 were cases of cut-throat, two being induced by drink, six by men more or less mentally affected, and four of whom were eventually invalided to England, and three others for which no motive could be assigned, but regarding one of these it is doubted whether it was a serious attempt to injure himself. In 5 instances the attempts at suicide were by hanging, in two of which the individuals were more or less mentally affected; in one the attempt was made just before an epileptic fit; one was induced by drink; and, in another, no motive could be assigned. One was a case of self-inflicted gunshot wound of chest, induced by drink, the man being ultimately invalided to England; and one a case of poisoning by oxalic acid, due to imaginary regimental grievance with reference to having been accused of making away with a comrade's money.

One hundred and thirty-five surgical operations were performed, 119 of which were primary and 16 secondary, death following in 14 of the former and in two of the latter. Amputation of the thigh at lower third was performed in a case of accidental gunshot wound of the right leg; the patient never thoroughly recovered from the shock of the operation, and died nine hours afterwards. There were also two cases of amputation of the leg on account of gunshot wounds; both were successful. Of six cases of amputation of the fingers one terminated fatally from tetanus, the rest recovered; as did also four cases of amputation of thumbs and toes. A case of ligature of artery for gunshot wound of head was successful, but the patient was eventually invalided. Thirteen cases of abscess of the liver were operated on, only two proving successful, and 11 terminating fatally. Of these two, both fatal, were by incision;

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two, one fatal, by incision and drainage; five, four fatal, by aspiration; also one by aspiration and drainage; one by aspiration and free incision; one by evacuation by trocar and canula, and one by tapping and drainage, all ending fatally. Abdominal section was performed in a fatal case of acute obstruction of intestines, but was not followed by relief. There were four instances of the removal of tumours, only one being of importance. Partial excision was performed for necrosis of tibia in a patient suffering from pyaemia, the necrosis being the result of an old-standing injury; the case terminated fatally. Excision of eye-ball, in a case of glaucoma, and in two cases of wound of the sclerotic were successfully performed; also the removal of testicle for tubercle, and a case of castration for fungus testis; also a case of lithotomy. There were two cases of forcible flexion of joints, one in a case af synovitis; the other in a case of adhesion of tendons, the former being successful. Besides these more important ones, there were several minor operations which need hardly be enumerated. *Bengal.*

Invaliding.—The number of men sent home as invalids was 1,009, being in the ratio of 25·10 per 1,000, which is lower by ·08 than that of the preceding year, and by ·86 per 1,000 than the decennial average. Taking the invaliding in the different arms of the service, as shown in Abstract XLI., it is found that the invaliding ratio in the Cavalry was 34·45 per 1,000, an increase of 12·90 on that of the preceding year. The highest ratio of invaliding in any Cavalry regiment was 53·38 per 1,000, in the 3rd Dragoon Guards, stationed at Rawal Pindi; the ratio was only 15·33 in 1890. The next ratio was 48·51 per 1,000, in the 2nd Dragoon Guards at Sialkot, followed by 44·55 in the 5th Lancers at Meerut. The lowest ratio of invaliding is shown by the 16th Lancers at Lucknow, 16·25 per 1,000. This regiment arrived from England in the latter part of the preceding year. The 1st (King's) Dragoon Guards comes next with 16·44 per 1,000; the regiment left *en route* for England in September. No invaliding took place in the 18th Hussars while in this Command, the regiment having arrived from Mhow in October. The invaliding ratio of the Artillery was 26·16 per 1,000, being an increase of 4·23 per 1,000 on that of the preceding year. Comparing the ratios of individual batteries, but excluding those which have only been a short time in the Command, P Battery, Royal Horse Artillery, at Lucknow, which left for England in October, leads with the high invaliding rate of 67·23 per 1,000, as compared with only 12·42 per 1,000 in 1890. The 31st Field Battery at Barrackpore and Calcutta, had a rate of 65·36 per 1,000 against 55·56. The third highest ratio, 61·64 per 1,000, was in the A Battery Royal Horse Artillery at Meerut, against only 14·18 per 1,000 in the preceding year. On the other hand, the following batteries had no men invalided during the year:—No. 10 Field Battery at Mooltan (arrived from Karachi in January), No. 15 Field Battery at Peshawar, No. 6 Mountain Battery at Darjeeling, No. 7 Mountain Battery at Quetta, and No. 16 Battery, Western Division, at Quetta and Roorkee. Low invaliding ratios occurred in the 39th Field Battery at Meean Meer, 6·49 per 1,000; the 54th Field Battery at Nowgong, 6·71; the 71st Field Battery at Meerut, 7·19, and the 68th Field Battery at Jullundur and Meean Meer, 7·87 per 1,000. The invaliding ratio in the Infantry has declined from 23·16 in the preceding year to 20·97 per 1,000. The 2nd Battalion Manchester Regiment at Sialkot, with a detachment at Amritsar, gave the highest ratio, 48·73 per 1,000. The next ratio was in the 2nd Battalion Scottish Rifles at Lucknow and Jubbulpore, with detachment at Fatehgarh, 45·83 per 1,000. The 1st Battalion, East Surrey Regiment, at Dum Dum and Barrackpore, was third with 43·25 per 1,000. The lowest ratio was 1·38 per 1,000 in the 1st Battalion King's Royal Rifle Corps at Gharial and Rawal Pindi; the next above, 5·13 per 1,000, being in the 1st Battalion Royal Welsh Fusiliers at Peshawar and Cherat. The 1st Battalion Royal Fusiliers at Quetta also had a low invaliding rate, 6·77 per 1,000.

Tables showing the influence of age and length of service in the country on the sickness mortality and invaliding have been given in the preceding pages. It will be observed that as usual the invaliding rate is highest among men of 40 and upwards, reaching 52·85 per 1,000; and lowest, 12·83 per 1,000, in those under 20 years of age. Men of 20 to 25 years of age, however, come second with 28·10 per 1,000, and those of 35 to 40 third with 26·78 per 1,000, differing in this from the sequence of the preceding year in that these

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two classes then held a reverse order. Men classed in the age period of 25 to 30 years with 23·63 per 1,000 come fourth, and those in the succeeding quinquennial period with 17·88 per 1,000 fifth, the sequence being the same as in the preceding year. Comparing the ratios of the several age periods in the two years, it is noticed that the ratio for men of 40 and upwards shows a noteworthy increase of 12·85 per 1·000, while that of men under 20 has an increase of 4·71 per 1,000; the only other increase in men of 20–25, being a fractional one. In men of 35 to 40, however, the ratio shows a decline of 7·33 per 1000, and in those of 30–35 one of 2·32 per 1,000, the decrease in the quinquennial period next below being only fractional. As to the influence of length of service in the country the invaliding ratio was highest, 32·93 per 1,000 in men of 5 to 10 years' service, next in men in the second year of service, 28·75; then in men in the third year, 26·67; followed by men in their fifth year, 25·92; then among men of over 10 years, 22·12; and among men in their first year, 19·10 per 1,000; the lowest ratio occurring in the men in the fourth year of service, 17·61 per 1,000. This varies considerably from the order observed in 1890, when the highest ratio was found in the men of longest service, the ratio falling gradually, and almost in order according to the diminishing number of years of service, until the lowest was reached in men in their first year's service. As compared with the ratios of the preceding year, those of men in the first 3 years of service show an increase respectively of 8·70, 4·51, and 3·62 per 1,000, while all the others are lower, the decrease being most marked, 20·86 per 1,000, in the ratio of men having over 10 years' service; the decrease in the fourth year men was 6·65, and in the fifth year men 5·42 per 1,000.

The principal causes of invaliding were dysentery 37 cases, equal to a ratio of ·92 per 1,000; malarial fevers 93 or 2·31 per 1,000; secondary syphilis 104, or 2·59 per 1,000; debility 138, or 3·43 per 1,000; rhematism 42, or 1·04 per 1,000; tubercular diseases 64, or 1·59 per 1,000; diseases of the nervous system 84, or 2·08 per 1,000; diseases of the organs of special senses 62, or 1·55 per 1,000; diseases of the circulatory system 101, or 2·51 per 1,000; diseases of the respiratory system 21, or ·52 per 1,000; diseases of the digestive system 75, or 1·87 per 1,000, of which 48 were cases of hepatic affections; diseases of the organs of locomotion 41, or 1·02 per 1,000; and injuries 48 cases, or 1·18 per 1,000. Compared with the corresponding ratios for the preceding year, and the quinquennial average ratios, the marked fluctuations are those occurring under secondary syphilis, the ratio of which shows an increase of ·60 per 1,000, and of 1·32 per 1,000 respectively; the ratio for malarial fevers has increased by 4·9 and 1·09 per 1,000, and that for diseases of the organs of locomotion by ·34 and ·35 per 1,000 respectively, in the two comparisons. Debility, which gives a ratio fractionally lower than that of 1890, is ·56 per 1,000 higher than the quinquennial average, while for enteric fever the ratio has increased from the quinquennial average of ·16 and ·36 in 1890 to ·47 per 1,000 in the year under report. On the other hand, there is a decline of 1·09 per 1,000 under diseases of the circulatory system as compared with 1890, and one of ·63 per 1,000 from the average of the preceding 5 years; a decrease of ·32 and ·11 per 1,000 respectively, under diseases of the digestive system; and a fall of ·31 per 1,000 from the preceding year's ratio under tubercular diseases, which showed, however, an increase of ·10 per 1,000 on the quinquennial average.

The number of men finally discharged as medically unfit for further service was 615, equal to a ratio of 15·30 per 1,000, which is lower than the corresponding rate in the previous year by 1·86, but higher than the average rate of the preceding ten years by 2·18. The principal disabilities necessitating invaliding were dysentery 17 cases, or ·42 per 1,000; malarial fevers 25 cases, or ·62 per 1,000; secondary syphilis 49 cases, or 1·22 per 1,000; debility 75 cases, or 1·87 per 1,000; rheumatism 17 cases, or ·42 per 1·000; tubercular diseases 59 cases, or 1·47 per 1,000; diseases of the nervous system 78 cases, or 1·94 per 1,000; including 53 cases, or 1·32 per 1·000 of mental disease; diseases of the eye 20 cases, or ·50 per 1,000; diseases of other organs of special senses 25 cases, or ·62 per 1,000; diseases of the circulatory system 123 cases, or 3·06 per 1000; diseases of the digestive system 23 cases, or ·57 per 1,000; diseases of the organs of locomotion 29 cases, or ·72 per 1,000; and injuries 34 cases, or ·84 per 1,000. Compared with corresponding ratios

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for the preceding year, an increase of ·15 is observed in the ratio for dysentery, one of ·26 in that for malarial fevers, one of ·34 in that of secondary syphilis, one of ·47 in that of tubercular disease, one of ·29 in that of diseases of the circulatory system, and in a few other cases to a less extent. Among the instances of decrease may be mentioned, 1·65 in the ratio for debility, ·50 in that of diseases of other organs of special senses, and ·38 in that of diseases of the digestive system. *Bengal.*

Officers.—The average strength of officers for the year was 1,176, the number of attacks of illness amounted to 915, the number of deaths to 21, and the number invalided to England to 73. The ratio of sickness was 778·1 per 1,000, that of deaths 17·86, and that of invaliding 62·07; which compared with the corresponding ratios of the previous year are lower by 201·8, 5·70, and 5·12 per 1,000 respectively. Of eruptive fevers there were only 8 cases including 2 cases of chicken-pox, 1 of measles, and 5 of epidemic rose rash, and none of small-pox against 4 in the previous year. 35 cases of enteric fever occurred during the year with 11 deaths as compared with 65 and 6 in the preceding year. 10 officers were invalided to England on this account, and 4 remained under treatment at the end of the year. The ratio of attacks to strength was 29·8 per 1,000, against 56·7 in 1890, and 24·8 per 1,000 among the non-commissioned officers and men during the year under report, that of deaths being 9·35 per 1,000 against 5·24 in the preceding year, and 6·67 per 1,000 the death rate of the non-commissioned officers and men in the present year. The percentage of mortality to attack was as high as 31·4, as compared with 9·2 last year, and 26·8 among the non-commissioned officers and men. The cases were distributed over 16 stations, namely, 7 cases with 1 death at Meerut, 5 with 2 deaths at Rawal Pindi, 3 cases and 1 death each at Allahabad and Ranikhet, two fatal cases each at Dinapur and Quetta, 2 cases (no death) each at Lucknow and Peshawar, a fatal case at Kasauli, and a case each which recovered at Fatehgarh, Muttra, Chakrata, Umballa, Mooltan, Murree, and Thobba, also one on the march respectively. A death at Jhansi of a case remaining over from the preceding year. Other continued fevers gave a ratio of 70·6 per 1,000, being a decrease of 27·1 from that of the preceding year. There were no cases of cholera among the officers during the year. Dysentery caused 32 cases of illness equal to a ratio of 27·2 per 1,000, a decline of 1·6 from that of the preceding year. Influenza which furnished a ratio of 74·2 in the previous year, caused only one 12·7 per 1,000. Malarial fevers including 195 cases of ague, 21 of remittent fever and 5 of malarial cachexia, gave a ratio of 187·9 per 1,000, an increase of 3·8 per 1,000 on that of the preceding year; the only death under this heading was due to remittent fever. Venereal affections had a ratio of 21·3 per 1,000, a decrease of 2·3 from the preceding year's ratio; while debility with a ratio of 23·0 per 1,000 was higher by 3·8, and rheumatic affections with 10·2 lower by 9·0 per 1,000 than in the previous year. Diseases of the nervous system furnished 14 cases, being in the ratio of 11·9 per 1,000, a decline of 4·7 per 1,000; they included 3 cases of mental disease and 2 of inflammation of cerebral membranes; there were no fatal cases. 44 cases were due to diseases of the respiratory system, 31 of these being instances of bronchitis, 7 of pleurisy, and 4 of pneumonia, 2 deaths being recorded under the last-named. The ratio, 37·4 per 1,000, is higher by 4·2 than that of the previous year. Diseases of the digestive system furnished a ratio of 124·1 per 1,000, which was lower than that of 1890 by 16·4. Diarrhœa and hepatic affections were the principal causes of illness, the former giving 56 cases, one fatal, and the latter 36, five proving fatal from abscess of the liver. The ratio for diseases of the skin (boils and ulcers chiefly) has fallen from 41·9 per 1,000 to 28·9, and that for injuries from 145·8 in the preceding year to 113·1 per 1,000, the latter were chiefly made up of cases of contusions, wounds, and sprains, but included also 11 cases of fracture, 5 of concussion of brain, 3 of gunshot wounds, 2 accidental and 1 an old-standing wound received on active service, and a fatal case of compression of the brain, the result of an accident at polo. A case of dog bite, the animal suffering at the time from rabies, is recorded. The officer proceeded to Paris to undergo the treatment of M. Pasteur. The causes of invaliding were enteric fever 10 cases, malarial fever 12, dysentery 3, debility 13, hepatic diseases 11, gunshot wounds 2, diseases of the nervous system 6, including 2 of mental disease,

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urinary diseases 2, and septicæmia, constitutional syphilis, rheumatism, anæmia, ophthalmic disease, palpitation, laryngitis, pneumonia, obstruction of the intestines, periostitis, boils, poisoned wounds, and concussion of the brain, one case of each.

Women.—The average strength of the women was 1,723; there were 1,175 admissions into hospital and 30 deaths. The admission rate was 681·9 per 1,000, and that of mortality 17·41 per 1,000,—the former being lower by 75·2 per 1,000, but the latter higher by 3·19 as compared with the corresponding rates of the previous year. There were only 2 cases of eruptive fevers, one being a very mild case of small-pox at Delhi, and the other one of measles at Naini Tal. For enteric fever there were 17 admissions with 5 deaths, against 18 and 2 in the previous year. The admission ratio, 9·9 per 1,000, was fractionally lower; but the death rate, 2·90 per 1,000, was 1·72 higher than in the preceding year. Six of the cases and 2 deaths occurred at Sialkot, there were 2 cases at Kasauli; a fatal case each at Meerut, Jullundar and Murree, and a case each respectively at Ranikhet, Jubbulpore, Agra, Nowgong, Delhi, and Ferozepore. Simple continued fever caused 37 admissions, being in the ratio of 21·5, which is a decrease of 8·1 from that of the preceding year. There were 7 cases of cholera, of which 6 were fatal, against 5 and 2 deaths in 1890, they occurred in Fort William, Allahabad, Fort Allahabad, Lucknow, Meerut, Quetta and Fyzabad respectively, that at the last-named having recovered. Dysentery furnished 24 cases and 1 death, being in the ratios of 13·9 and ·58, as compared with 18·4 and 1·18 per 1,000 in the previous year. There were only 4 cases of influenza against 26 last year. For malarial fevers the ratio of prevalence, 136·4, was 20·6 per 1,000 lower than in the preceding year. This included 214 cases of ague; 15, one fatal, of remittent fever, and 6 of malarial cachexia. Under septic diseases are comprised 6 cases, 3 fatal, of puerperal septicæmia, and one case of erysipelas. 365 admissions are recorded for debility, equal to a ratio of 211·8, a decline of 14·5 from 1890; while for rheumatic affections there were 16 admissions, including 2 cases of rheumatic fever, the ratio, 9·3 per 1,000, showing a decline of 1·4. There were only 2 cases, no death, of tubercular disease of the lungs against 5 with 3 deaths the year before; but there were 2 cases with one death returned under the head of purpura. Anæmia gave 27 admissions, or a ratio of 15·7 against 17·7 in 1890. Under local diseases those of the nervous system furnished 22 cases, with one death, as compared with 25 and 4 deaths in the preceding year, they included 12 admissions for neuralgia, 4 for hysteria, 2 for melancholia, and one for epilepsy; the death being due to eclampsia. All but one of the 19 cases of ophthalmic disease were due to conjunctivitis. Diseases of the circulatory system gave 10 admissions and one death as compared with 11 cases and 3 deaths in 1890, palpitation accounting for 5 admissions, phlegmasia dolens for 2 and varix for 3; the death was due to valvular disease of the heart. Respiratory diseases with 36 admissions gave a ratio of 20·9 against 33·2 in the preceding year. There were 29 cases of bronchitis, 3 of pleurisy, 2 of hæmoptysis, 1 of pneumonia, and 1 of passive congestion of the lungs. There were no deaths. Diseases of the digestive system accounted for 139 admissions and 6 deaths, being in the ratios of 80·7 and 3·48 per 1,000 respectively, both being higher than the corresponding ratios of 1890, by 6·1 and ·52 respectively. The principal causes of admission were diarrhœa 37 cases, dyspepsia 32, and liver affections 26, and the deaths were from hepatic abscess 2, and quinsy, intussusception, diarrhœa and puerperal peritonitis 1 each. There were 153 admissions and 4 deaths under diseases of the generative system, the ratios being respectively 88·8 and 2·32 and both higher than the corresponding rates of the previous year by 14·7 and 1·14 severally. The causes of the admissions were as usual numerous, the largest number of cases occurring under abortion, viz., 33. The deaths were due to sudden death after delivery 3, and premature labour 1. Of the cases returned under the remaining classes of diseases, the only one worth mentioning is a fatal case of heat apoplexy.

Children.—The average strength of the children was 3,177, the number admitted was 1,289, and the deaths 141. The ratio of admission was, therefore, 405·7, and that of deaths 44·38 per 1,000, which compare favourably with the ratios of the preceding year, being lower by 75·7 and 8·04 respec-

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tively. Eruptive fevers caused only 96 admissions and 5 deaths; 74 of these, with the 5 fatal cases, were due to measles, 21 to chicken-pox, and one to scarlet fever; there were no cases of small-pox. The admission rate was only 30·2, and the mortality rate 1·57, as compared with 94·6 and 3·10 per 1,000 respectively in the preceding year, when an epidemic of measles in 27 stations caused no fewer than 293 admissions. In the present year the disease was somewhat prevalent in Fort William and Darjeeling, 34 cases, 4 fatal, having occurred at the former and 16, with one death, at the latter station. In the other stations there were 7 at Barrackpore and 7 at Campbellpore, 5 at Dinapore, 4 at Benares, and 1 at Dum Dum. The case of scarlet fever occurred at Sialkot. There were also 45 cases of whooping cough, with 3 deaths, against 30 and one death in the preceding year, a fatal case of diphtheria at Rawal Pindi, against 2 fatal cases in 1890, and 5 cases of mumps. Enteric fever caused only 10 admissions and 3 deaths, as compared with 28 and 3 in the previous year; 2 cases, one fatal, occurred at Allahabad; 2 cases, no death, at Rawal Pindi; a fatal case at Delhi and Quetta respectively; and a case each, which recovered, at Sipri, Meerut, Amritsar, and Murree. Simple continued fever furnished 67 cases with 2 deaths, against 115 and 6 deaths in 1890, and cholera 7 cases, 3 fatal, against 3 and 2 respectively in the year before. Three of the cholera cases, two fatal, occurred at Benares; one fatal case at Lucknow, and a case each at Fort Allahabad, Cawnpore, and Fyzabad severally. For dysentery there were 45 admissions and 5 deaths, against 37 cases, 7 fatal, in the preceding year; while under influenza 2 cases only are returned against 22 and 1 death in 1890. Malarial fevers gave an admission rate of 90·0 per 1,000, and a death rate of 2·52, both being higher than those of the preceding year by 6·3 and ·04 per 1,000. They comprised 260 cases of ague, with one death; 24, with 6 deaths, of remittent fever; and 2 cases of malarial cachexia and one death. Erysipelas accounted for 4 admissions and 2 deaths, and from congenital syphilis a death is recorded; while parasitic diseases furnished 4 cases only. Under developmental diseases 124 cases and 25 deaths are returned, against 116 and 16 in the preceding year; 13 of the deaths being recorded under immaturity at birth, and 12 under debility. As to the remaining cases under general diseases 8, with 3 deaths, were cases of tubercular disease; 7, one fatal, of anæmia; 2, one fatal, of scrofula; 3 of rickets, and one of purpura. Among local diseases affections of the nervous system are found to have caused 43 admissions and 29 deaths, as compared with 50 and 33 respectively in the preceding year. 30 of the admissions, with 24 deaths, being due to infantile convulsions, and 8, with 3 deaths, to inflammation of the cerebral membranes, while 2 of the fatal cases are returned under chronic hydrocephalus. Diseases of the eye were somewhat more prevalent, the admission ratio, 27·7, being 2·0 per 1,000 higher; all but one of the 88 returned were cases of conjunctivitis. Three cases are returned under diseases of the circulatory system, one of valvular disease of the heart, and 2 fatal cases of syncope, both at Quetta. There were 113 admissions and 6 deaths under respiratory diseases, the ratios of which, 35·6 and 1·89, were in the former 3·5 less than, and in the latter little more than, a half of the corresponding rates of the previous year. Among them are included 90 cases (one fatal) of bronchitis, 11 with 2 deaths of pneumonia, 8 of croup with one death; two cases, one fatal, of laryngitis, and a fatal case of empyema; also a case of chronic pneumonic phthisis. The ratio for diseases of the digestive system also compare favourably with those of the preceding year, the admission rate, 70·2, and that of mortality, 12·59, being lower by 1·8 and 4·47 per 1,000 respectively. Of the 223 admissions and 40 deaths under this head 122 and 22 deaths were cases of diarrhœa, and 55 with 8 deaths of teething; the remaining fatal cases being 3 of enteritis, 3 of peritonitis, and one each of catarrhal inflammation of intestines, intussusception, abscess of liver associated with dysentery and jaundice. The only cases that need be mentioned of those occurring under the remaining classes of disease are a fatal case returned under suppuration of lymphatic vessels, one case of chronic nephritis, and six of fracture. *Bengal.*

Sanitary Conditions.—The following remarks on the health of the troops and the sanitary condition of the different districts and stations are taken from the reports of the Principal Medical Officer and medical officers in charge of station hospitals.

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Presidency District.—It is reported that the general sanitary conditions of the barracks at Fort William were satisfactory, the buildings being well ventilated, well drained, not over-crowded, and provided with a good water supply. The Ravelin quarters, however, which are occupied by departmental warrant and non-commissioned officers are not so satisfactory. They are damp, dark, imperfectly ventilated, and exposed to the influence of the cunette of the fort, the water in which rises and falls with the tide, and offensive odours have frequently been complained of by the occupants. The condition of these quarters was brought to the notice of the proper authorities and measures for their improvement were under consideration. At Dum Dum, although the barracks and hospital are kept in an excellent sanitary condition, the native villages in the neighbourhood, which are for the most part in an insanitary state, are said to constitute a danger to the health of the troops. The water supply obtained from the Fulta waterworks, brought in carts from Cossipore, and again filtered before use, is of good quality. It was discovered, however, that the water so brought became contaminated *en route* and steps were at once taken by the medical officer, but he notes that it is very much to be desired that the Fulta water should be brought in pipes to the station itself. It is understood that this will be done. At Barrackpore the health of the troops was fairly good, but the admission rate is somewhat above that in the previous year. The prevailing admissions were ague and dysentery. The sanitary conditions of the station are satisfactory and the water supply excellent, the latter is obtained from the Fulta waterworks and distributed by iron pipes. The water in the tanks outside cantonments is reported to be bad. At Darjeeling the general health compared favourably with that of previous years and the convalescents sent up rapidly regained their strength generally. The general sanitation is well looked after; the water supply, derived from springs, is excellent and abundant, and the hospital ablution rooms are supplied with hot water apparatus. Excreta are carried some distance down the hill side and buried. The proposed wire rope way for carrying excreta to more suitable ground could not be carried out owing to financial considerations, but it is stated that the present arrangements are not unsatisfactory. A number of native huts scattered about cantonments were cleared away during the year, thus facilitating sanitation. At Gnathong, Sikkim, the troops, comprising one company of infantry relieved every six months, are still accommodated in wooden huts, which were repaired during the year. The hospital accommodation, also in a wooden hut, is supplemented when necessary by the use of a barrack room, the latter, however, is draughty and cold. The sanitary condition of the fort was satisfactory, and it is stated that the men did not suffer so much from the cold as sufficient warm clothing was supplied to the relieving detachment. The health of the troops was very good, except that of the detachment which arrived in October, the men having suffered much from the effects of the severe march from Darjeeling, ague being very prevalent among those predisposed to the disease.

Allahabad District.—At Allahabad the general health of the troops was, on the whole, good, with the exception of a short but severe visitation of cholera, and the increased prevalence of venereal disease. The general sanitary condition of the barracks, married quarters, &c. were satisfactory, and the accommodation ample. The hospital was inadequate as regards accommodation owing to the number of cases of venereal affections, and it was necessary in consequence to treat many cases in tents. The water supply until towards the close of the year was from wells, but at that time the service of the municipal waterworks was extended to cantonments. The water is of good quality; it is conveyed in iron pipes to filter beds and tanks, and afterwards distributed to the station and cantonments. At Fort Allahabad the general health of the troops was good. Scrupulous care was exercised as to the sanitary condition of the fort, which was at all times most satisfactory, except the native latrines, which have since been placed in a thoroughly good state. The barrack rooms were well kept, also the married quarters. For the latter the construction of ventilators opening into the verandah was recommended. There was no overcrowding in hospital, but during the summer months it was necessary to transfer some of the patients to the cantonment station hospital for treatment owing to the increase in numbers. At Dinapore there was an increase of admission rate as compared with that in the previous year. Malarial fevers were especially prevalent in the latter part of the year; this was attributed to the

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drying up of the nullahs and the subsidence of the water in the rivers. Ague was the most frequent cause of admission, and the cases were, as a rule, mild. The barracks were generally in a satisfactory sanitary condition, there was no overcrowding, ventilation was satisfactory, and no defects were reported in the drainage or latrine arrangements. The water supply was satisfactory, and cleanliness was carefully attended to. The hospital was also in a satisfactory sanitary state. Ablution arrangements were good, tubs were provided for bathing, and enclosed spaces with partitions have been erected in the bath-rooms to secure privacy. At Benares the general health of the troops was fair, and compares favourably with that in the preceding year. There was a slight epidemic of dengue, a few cases of enteric fever, and three cases of cholera. The sanitary condition of the barracks was generally satisfactory, and no sanitary defect was discovered either in the barracks or subsidiary buildings. The water supply was carefully examined and found to be very good. With regard to the occurrence of disease, especially typhoid fever, the medical officer is of opinion that it is not in the barracks but in the surrounding dirty and overcrowded bazars and villages which the men are wont to frequent that the danger lies. The report on the sanitary condition of the hospital and its accessories is satisfactory. *Bengal.*

Oudh District.—The Principal Medical Officer of the district remarks that the general health conditions of the several stations were good, and no disease was traced to any defective arrangements in barracks or their vicinities. The year under report must be looked upon as a comparatively unhealthy one. Cholera was present as an epidemic to a considerable extent throughout the district, but among the troops it only broke out at certain stations. Enteric fever persisted throughout the year at the various stations in the district, in no special feature differing from what has hitherto been observed. At Lucknow the ratio of admission to hospital among the troops shows a decline, as compared with that in the previous year. The sanitary condition of the barracks and their surroundings were generally good, and no new buildings were erected in connexion with them during the year. The hospital also was in a very satisfactory state, and ventilation was very good. Nursing sisters' quarters were sanctioned, as also an enlargement of the station hospital itself, including the addition of an officers' hospital, and it has been recommended that No. 1 Redoubt barracks should be permanently re-appropriated as a hospital building, should additional accommodation be required. Lucknow military prison was in a very satisfactory sanitary state; the buildings are in a thorough state of repair, and the cells are kept in good order. There was no defect in ventilation or drainage, and the water supply was good and sufficient. A tank was built, adjacent to the principal well in the prison, for the purpose of collecting water to supply the Macnamara filter. All recommendations put forward were attended to. At Cawnpore there was an improvement in the general health of the troops, as compared with that in the previous year, but cholera and enteric fever of a severe type occurred during the year. The cantonment is well situated; the sites of the buildings are good, and there are no sanitary defects likely to affect the health of the troops. There was no overcrowding in barracks, and the ventilation, lighting, &c. were satisfactory. The banks of the river are high, and no insanitary condition was noticed in its bed. An improvement has been made as to the manner and direction in which the city drain reaches the river, so as to avoid as far as possible any insanitary condition. The water supply is from wells, the quality being good. Filter beds as well as Macnamara filters are in use, and are properly looked after. The schemes which had been put forward for the improvement of the drainage of the city and for providing a free and pure water supply were still under consideration. At Fatehgarh there was a decrease in the admission ratio as compared with the previous year's rate, but the average duration of cases of illness was longer. Venereal affections were prevalent, and some cases protracted. The station was generally in good sanitary condition, but the medical officer remarks that a desirable improvement would be the paving of all open drains in the infantry lines. He also remarks that during the summer months the barracks were intensely hot in the afternoon, owing to the western windows being unprotected from the sun, and recommends that suitable green shades may be erected. He further brings to notice the existence of four badly kept villages not far distant from barracks, the sanitary conditions of which were

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being looked into with a view of measures being taken for their improvement. It is stated that the sanitary surroundings of the European subordinates' quarters in the gun-carriage factory leave much to be desired. There is a want of free circulation of air, and the area is too crowded with buildings. At Sitapur, the general health of the troops throughout the year was very satisfactory, and the sanitary conditions of the barracks, quarters, and hospital good, with a few minor exceptions. The ventilation of the barrack-latrines was somewhat defective, owing to the partition walls being carried up to the roof; to remedy this, a trellis, work six feet square, was to be let into each partition wall. The accommodation of the kitchen attached to the married quarters was defective, both as to superficial area and number of fireplaces; this was represented, but the increase required was postponed until the next year for want of funds. A recommendation was made that the roof of the hospital should be thoroughly repaired, and an estimate was prepared for the renovation of the whole building. At Fyzabad the ratio of admission into hospital shows an increase as compared with that in the previous year. The principal causes of admission being, as usual, ague and venereal disease. The general sanitary condition of the barracks as regards cleanliness, ventilation, lighting, and conservancy were satisfactory, and the water supply and lavatory arrangements were good. The only change effected during the year was an increase to the infantry guard room. The sanitary state of the hospital was also good, and no recommendations were necessary.

Rohilkhand District.—At Bareilly there was a marked improvement in the health of the troops as compared with the two previous years. Venereal affections were the prevailing diseases. The sanitary conditions of barracks were satisfactory, and there was no over-crowding. No defects were reported in the drainage or the latrine arrangements. The water supply from wells was good, but a large filter bed was discontinued as it was believed that the material in it was not satisfactory. It is stated that fires would be acceptable in the cold weather, and in hospital fuel is sanctioned for the ward in which enteric fever cases are treated. The hospital accommodation is ample for the ordinary garrison, but during the camp of exercise it was necessary to add a section hospital under canvas. At Moradabad the situation of the station is good, and the barrack building is well ventilated, clean, and with satisfactory sanitary surroundings, but the latrines are said to be at too great a distance, as also the guard-room and cells. The water supply from wells is good and ample. The general drainage of the place is somewhat inefficient as the parade ground is very wet during the rainy season. The hospital is not entirely satisfactory, the ventilation is not well regulated, the position of the baths and lavatories is objectionable, and there is difficulty in sufficiently isolating serious cases. At Shahjehanpur the sick rate was high, but not so much as in the previous year. The general sanitary condition of cantonments, barracks, &c. was satisfactory throughout the year, and all defects likely to affect the health of the troops were rectified as far as possible. There was no over-crowding in the hospital wards, but it was necessary at a certain time of the year to supplement the accommodation by the use of a barrack room in which to treat cases of venereal disease. A separate single-storied thatched building is now used for the hospital for women and children instead of one of the wards in the station hospital, and the old objection of want of privacy is thus removed. At Ranikhet the general sanitary condition and arrangements were satisfactory, except that the roofs of some of the barracks leaked during the rains; it is proposed to re-roof them with sheet-iron. The flooring of some of the lavatories and cook-houses also required repair. The water supply was good and sufficient, and great care was taken in its conveyance from the springs. The land above the spring from which water for the standing camp was taken was kept from cultivation during the year. Much was done to lessen the amount of vegetation with which the cantonment had become overgrown. The sanitary arrangements of the standing camp were good, and the huts afforded sufficient accommodation, but there were no rooms for non-commissioned officers; these are, it is said, in course of construction. Quarters for officers were greatly needed, and some were being built. The hospital was satisfactory, except that the accommodation was insufficient, and it was necessary to use tents, but another block to accommodate 50 patients was under construction, also laundry, cook-house, and servants' quarters. At Chau-

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buttia the barracks are wooden huts with end walls of stone and iron roofs; there was no over-crowding in them for any excess was accommodated in tents. Recommendations were put forward that the barrack rooms should be provided with verandahs and dining rooms. The guard room was too small, but its increase in size was under consideration. The general sanitary condition as to drainage appears to be satisfactory, but the water supply is reported to be defective. Two of the three springs from which water is obtained are unsatisfactory, but steps are now being taken to substitute water from a newly-discovered spring as a supplementary source in place of one said to be impure. The hospital accommodation is insufficient, and over-crowding is avoided by tents. Plans have been made for the erection of stone buildings in place of the present wooden huts to be provided as funds become available. At Naini Tal there was marked improvement in the health of the troops, the sick rate having fallen considerably from that in the preceding year. The barracks are one-storied buildings mostly with iron roofs, but some thatched. Those on the Kailana side were vacated during the rains as they were thought to be unsafe. The wooden recreation room was also moved and erected on a fresh site. A block of the old buildings was heightened and re-roofed, and a dormer window added to each room. Additional ventilation for this block was recommended, and was under consideration. Some new cells were constructed on the site of one of the old buildings. The water supply from the lake conveyed by pipes and passed through filter beds is of fair quality, but the lake is much exposed to contamination. Locusts fell in large numbers into the lake in August; water for drinking purposes was then obtained temporarily from the spring at the head of the lake. An improved water supply is, it is said, in course of provision by the municipality by which the water from the spring at the head of the lake will be brought round in pipes. *Bengal.*

Narbudda District.—At Jubbulpore the general health of the troops shows a considerable improvement, which is principally attributable to the diminished prevalence of malarial fevers. The general sanitary condition is reported as excellent, and the water supply sufficient and of good quality, coming from a reservoir five miles away. The medical officer in charge remarks that this water supply should be extended to all houses in cantonments, and not only to barracks, bazar, and city, as at present. The hospital accommodation is not sufficient, and inner verandahs have frequently been occupied when the weather was not suitable for pitching tents, or when a spare barrack was not available. The bath and ablution accommodation is also insufficient and unsatisfactory, but a sum has been allotted for the erection of two baths, with hot and cold water laid on. A separate hospital for women and children is required, also quarters for medical warrant officers. The infectious disease ward is old and in bad repair, and should be rebuilt. At Saugor the health of the troops was good, apart from the prevalence of ague and venereal diseases. The sanitary condition of the barracks and lines was very good throughout the year, no sanitary defects having called for representation. It is stated, however, that the artillery barracks do not afford sufficient accommodation for requirements, and that the station hospital is not well suited for the purpose. A plan is under consideration to complete the old hospital building, which was condemned some years ago, and to finish the barracks as single storied instead of double-storied blocks. At Pachmarhi there was a great diminution in the number of admissions for ague, mainly due, it is believed, to the clearing of some of the dense jungle in the immediate vicinity of the cantonment; the thinning is still going on, and as it proceeds it is confidently expected that there will be a greater improvement in the health of the community. The sanitation of the station was, and remains, in a satisfactory state. There was no overcrowding in barracks, no defect in ventilation, and no want of cleanliness. The water, after the rains, contained an excess of vegetable organic matter, and it was recommended that all the wells should be thoroughly cleaned out. The Principal Medical Officer of the district is of opinion that the great want in this station is accommodation for the officer attending the musketry class; at present they live in detached bungalows, which are too crowded, and the ventilation of which is bad. A ward in the hospital for sick officers is also recommended.

Bundelkhand District.—At Agra the general health of the troops was very good, and compares favourably with that in the preceding year. The admis-

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sions for climatic disease were comparatively few, and those for venereal affections much below those for the two previous years. The sanitary condition of the station appears to have been satisfactory. The water supply, though abundant, is stated to be very hard, and the Principal Medical Officer of the district considers that the extension of the city waterworks to cantonments is a very great want. The project is understood to have been brought forward for consideration. The hospital is in good order, except that the building for women and children is not quite satisfactory as regards ventilation. At Jhansi the general health was good for this station, and the admission rate was considerably lower than that of the preceding year, due chiefly to the decrease in prevalence of malarial fevers probably consequent on the lateness of the rains and the diminished fall. The sanitation in cantonments was carefully attended to. The district Principal Medical Officer remarks that the artillery barracks are new and excellent, but the infantry barracks are old fashioned, some have very low plinths, in two there are four rows of beds, and the accommodation is not sufficient. The water supply is good, and the milk supply carefully watched. The sanitary condition of the surroundings of the barracks has been good and the latrines satisfactory. The surface drainage about the artillery barracks has been improved, and the nullah passing through cantonments has been straightened and levelled in the greater part of its course, but the work should be continued for the whole length of the nullah within cantonments. A new bakery was in process of construction, and plans for a new station hospital have been approved; the site is chosen, and the work was shortly to be commenced. In the meantime, the present building was re-roofed as it leaked badly. Accommodation was insufficient in the hospital at times, necessitating the use of barracks and tents. At Sipri malarial fevers were especially severe after the rains, no doubt due in great measure to emanations from a swampy tract of land to the west of and close to the barracks. There was no overcrowding in the barracks, but ventilation is imperfect, the buildings are very old without plinths, and the roofs were in bad condition. Drainage about barracks was also imperfect. Owing to these defects it has, it is stated, been decided to give up the station as soon as a new hospital is built at Jhansi, and the present one turned into barracks; in the meanwhile, the buildings were being re-roofed and the drainage improved. At Nowgong the ratio of admission into hospital was high, but not so much so as in the previous year. The general sanitary conditions of the cantonment appear to have been satisfactory. The barracks are described by the Principal Medical Officer as very good; there was no overcrowding and no defect in drainage. The hospital is reported to be generally satisfactory, but the latrines are of old barrack pattern, and it is proposed to replace them by a new one further from the hospital; the bath and ablution room is also of the old barrack pattern, and steps are being taken to enlarge it.

Meerut District.—At Meerut the prevailing diseases were fevers, due to climatic causes, and venereal affections, but there is a considerable decrease in the admission ratio as compared with that in the preceding year. The barracks are satisfactory and there was no over-crowding except in a bungalow belonging to the artillery during a course of instruction. The married quarters gave ample accommodation. In the lines of the infantry regiment there is a good filter well, from which all the water for drinking is drawn; it has been recommended that similar provision should be made for other lines. Several wells were cleared out during the year. The Principal Medical Officer of the district brings to notice the over-crowded state of the bazars in the cantonment, which contain a large proportion of individuals who have no concern with the troops, and he strongly recommends on sanitary grounds a careful scrutiny of the population of these bazars and the elimination of those who have no reason to reside there. He also recommends the periodical flushing during the hot weather of the large nullah and its subsidiary drains with water from the canal. The officers' bungalows are said to be too close together especially in the cavalry and infantry lines. At Muttra the general health of the troops improved, as compared with that in the preceding year. The surroundings of the station are said to be in fair sanitary condition, but certain of the barrack rooms are described as old buildings in which the ventilation is very defective; they are built end on to the prevailing wind and are

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excessively hot, there are also too close to the railway station. Small absorption pits were provided at the termination of the drains leading from the washhouses but they proved a failure. The water supply is from wells and of fair quality; all the wells for drinking were covered in during the year and for one well a large filter tank was erected and two others were about to be supplied. No. 1 hospital building was remodelled during the year, main wall raised and windows let in beneath a new roof; ventilation is very good. No. 2 building was also in progress of re-modelling. The hospital accommodation, however, was not found to be entirely sufficient. At Delhi there was a high sick rate almost entirely due to the prevalence of malarial fevers. The barrack accommodation is ample, being intended for a much larger garrison than the present. It is said that fuel for warming purposes would be a boon in the cold weather, when it was found necessary to issue two extra blankets to each man. For the married quarters fuel has been allowed in the colder months, much to the comfort of the families. The water supply for drinking and cooking purposes is from a well and is sufficient and of good quality, but new waterworks are under construction by which it is intended to pump water from the river to reservoirs on the ridge and to filter it before distribution to the city and cantonments. The city drainage is not satisfactory and a new and extensive scheme is under consideration. The moat of the fort also requires better draining. At Roorkee the general health of the troops was fair. The barracks are in good order and free from insanitary surroundings. There is one defect mentioned, the proximity of the ground used for the disposal of excreta to one of the barracks, and a new site at a greater distance from cantonments was obtained for the conservancy trenches and was to be taken into use as soon as the crops are removed, when the old site will be placed under cultivation. At Chakrata the health of the troops has improved as compared with the previous year, and the troops sent up were much benefited by their residence in the station. The climate is excellent and the sanitary condition of the barracks and their vicinity most satisfactory. The water supply at Chakrata was excellent, that of Kailana not so satisfactory. Three new barrack huts were opened at Kailana and more were in course of completion. At Landour the health of the troops generally improved very much and most of them recovered in a short time after their arrival. The sanitary condition of the barracks and their surroundings were very satisfactory, but the hospital is too far away from the hill on which the barracks are situated, being quite a mile from the nearest and two miles from the most distant. It is, besides, barely large enough for requirements and would be better for another ward. *Bengal.*

Sirhind District.—Compared with that in the preceding year the general health of the troops at Umballa shows marked improvement which is in great measure due to the decreased prevalence of malarial fever and venereal diseases. The sanitary condition of the barracks was generally satisfactory, and any minor defects which were discovered was brought to notice and remedied. The hospital was also satisfactory, but the following alterations were made in it during the year; the building formerly used as a ward for enteric fever cases was converted into quarters for nursing sisters, the two wings of the main building were re-roofed with Allahabad tiles, the roofs being raised ten feet and increased ventilation afforded; fireplaces were built in the inner verandahs and the roofs raised, thus giving additional accommodation for sick. At Subathu also there was considerable improvement in the health of the troops, and the sanitary condition was on the whole satisfactory. The water supply, though reported to be good on analysis, is looked upon as slightly suspicious owing to its source being on a hill on which are the hospital and other inhabited buildings. The quantity of the water is limited, and it was necessary to supplement it from two other sources. The want of proper latrine accommodation was felt, and movable iron latrines were sanctioned. At Dagshai the health of the troops was very satisfactory, and weakly men sent up from the plains benefited considerably by residence in the station. The sanitary condition of the barracks was satisfactory. Five of the old married quarters were occupied by men during the hot weather. The Fitzwygram quarters for families consist of two blocks for twenty families, the rooms are well fitted, but small, too much so for married people with children. The ventilation of the infant school and of the can-

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teen requires improvement. The principal spring from which the water supply is obtained is said to afford naturally a pure water, but being situated below the bazar is liable to contamination. The arrangements for the removal of excreta, as has been previously reported, are not satisfactory, and a suggestion was made that all such material should be moved altogether from the hills by means of an iron tramway and then burnt. The hospital accommodation was not found quite adequate to requirements. At Jutogh the health of the troops was very satisfactory, and every effort was made to keep the station in as sanitary a state as possible. Of the barracks it is said that the lower ones are not quite so healthy as the upper ones, which may be due to the fact that there is not such a free circulation of air in and around the former as the latter, and that the latrines are too near; these, however, were about to be removed. The ventilation of the hospital, except that of a new ward recently constructed is not good, but it is stated that the older portions of the building are about to be re-roofed which will give an opportunity of improving it. At Solon the sanitary condition of the camp was excellent, but the vicinity of the cantonments on the east, viz., the bazaar and ground along the Kalka road is not in a satisfactory state. The water supply is from a very pure source and is brought in on mules, but it was understood that pipes were about to be laid to bring it direct to barracks. At Kasauli the original shingle roofs of the barracks were gradually being replaced by iron roofs. In addition to the natural drainage, which is good, some masonry drains were constructed. The water supply is obtained from a source which is open to pollution, and analysis has shown that it is not very good. A proposal has therefore been made to obtain water from a source on the other side of the hill, and to have it distributed by pipes to the station generally; this is under consideration. The ventilation and warming arrangements in hospital were satisfactory with the exception that the chimneys smoke from faulty construction, alterations were made, but without much benefit.

Lahore District.—At Meean Meer the general health of the troops was fairly good, apart from the prevalence of malarial disease. The sanitary condition of the barracks and cantonments was generally satisfactory. The hospital also was fairly satisfactory, except that it did not afford sufficient accommodation altogether, and it was necessary to supplement it by tents. The warming of the hospital by fire-places in the inner verandahs was unsatisfactory; an experimental stove was therefore built in one ward, and found to act well; its general adoption was consequently recommended, but this was not carried out, it is said, for want of funds. The disused guard room at the station hospital was in process of conversion into a ward for two officers, and a bungalow at a short distance from the hospital was rented for the accommodation of the nursing sisters. At Fort Lahore the admission ratio of the troops was very high owing to malarial fevers, but not so much as in the preceding year. At Ferozepore the general health of the troops was satisfactory, but there was some prevalence of malarial fever towards the end of the year; on which account a relaxation of duties was recommended in order that the men should be brought in from musketry before the sun got hot. The sanitary conditions are generally good, but the principal defect is the difficulty of drainage, the existing drains being insufficient to carry off the storm water. Tents were used when the accommodation in hospital was insufficient for the number of sick. A kitchen is required for the hospital for women and children. At Jullundur the general health of the troops was good, though there were some severe cases of malarial fever and rheumatism attributed to the very wet weather which was experienced in the camp of exercise. The general sanitary conditions were good. Some swampy ground near the artillery barracks was improved by drainage during the year. At Mooltan the general health of the troops and the sanitary conditions of the station were reported to have been satisfactory throughout the year. It is stated that, owing to the level nature of the ground, it is almost impossible to carry out an effective system of surface or subsoil drainage, but the extreme attention paid to the cleanliness and conservancy of the station tends materially to counteract any defects of drainage. The water supply is satisfactory, but the medical officer objects to the method of raising the water from wells by ropes, and suggests a system of pumping the water for distribution into covered receptacles. Tents were brought into use to supplement the hos-

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pital accommodation in the earlier part of the year owing to the prevalence of venereal disease. Plans and estimates for an infectious diseases hospital were approved of, and sanction was obtained to the conversion of a portion of the women and children's hospital into an officer's ward. At Amritsar there was an improvement in the health of the troops, the admission ratio having fallen a good deal as compared with that in the previous year. The sanitary condition of the cantonment and also of Fort Govindgarh was generally satisfactory, but complaints were repeatedly made of the offensive effluvia from the fort ditch and of its being a cause of unhealthiness, but nothing was done either to drain off the water or to fill in the ditch. At Bhagsu the health of the men was very good, and the detachment as a whole benefited very much by its stay in the station. The sanitary conditions of the place are reported to be generally satisfactory. At Dalhousie malarial fevers prevailed throughout the season, but especially soon after the first arrival of the troops. The system of warming the barracks at Balum is defective, there being but one fire-place to each room at one end; there should be one at each end, as at Ranikhet. Huts of the standard plan have been erected on Sonanathala for sixteen families. A wire tramway for the removal of excreta and refuse from barracks was proposed and taken into consideration. A station hospital of forty-eight beds was opened at the standing camp.

Rawal Pindi District.—At Rawal Pindi the general health was fair, but there was a sharp outbreak of enteric fever in the summer; this, however, has been previously alluded to. In July the waterworks were sufficiently advanced to render it possible to fetch pipe water from a reasonable distance to the barracks. The drainage of the station and latrine arrangements for natives in the bungalows were not entirely satisfactory, but efforts were being made for improvement in this direction. The huts at West Ridge were occupied, but the hospital is not yet built; however, three huts, which were temporarily unoccupied, were used for the sick. It is remarked that, as usual, there was more sickness in the Cavalry than in any other corps, which is attributed to the proximity of the barracks to the ponds in the park, which overflow during the rains, and which, gradually drying, leave a sort of marsh. At Attock the health of the troops was very satisfactory, and there was no overcrowding or other insanitary condition of barracks or subsidiary buildings throughout the year. At Sialkot there was the usual occurrence of malarial fevers during the earlier summer months, which is attributed by the medical officer in charge to the heavy winter rain and the soil surface drying later on. The drainage of the station is said to be bad, and to require early attention; the matter was brought to notice. The general conservancy arrangements have, it is said, been improved a great deal. In the station hospital the fireplaces have been rebuilt to prevent the chimneys smoking; the walls of the wards were freshly plastered, the floors repaired, and the kitchen flagged. At Campbellpore, the medical officer states that health was well maintained, and the sanitary condition was satisfactory. The barracks were nearly all re-roofed with tiles and a mud coating, and made sloping; the cells and hospital are still flat-roofed and covered only with mud. The hospital accommodation is limited, and is supplemented by a barrack room or tents. A new hospital for women and children was built early in the year. At Murree the general health of the troops was good, and the sanitary condition of the barracks and married quarters at Willow Bank and Cliffden satisfactory. The supply of drinking water from the tanks below Willow Bank was stopped in July as it was found on analysis to be impure; all drinking water was thereafter obtained from Cliffden. A system of pucca main drains for the hospital compound was about to be carried out at Khyra Gully, and no sanitary defects were reported. At Kalabagh the health of the troops was good, and no sanitary representations were necessary. At Kuldunnah the health of the troops was excellent. Infectious diseases and those commonly attributed to defective hygienic conditions were entirely absent, and the sanitation of the station left nothing to be desired. At Gharial the troops were accommodated partly in stone huts and partly in tents; two additional huts were completed during the year. Nearly all the married families were in hutted quarters. The drainage was satisfactory except in one instance, which was brought to notice. At Thobba the sanitary condition of the camps, barracks, hospital, and their vicinity was very satisfactory, and the water supply was good. The medical

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officer in charge remarked that the appearance, health, and strength of the troops stationed there showed marked improvement. At Lower Topa there are only three permanent barracks, two were used for the hospital and one for canteen: the men being quartered in tents. The sanitary conditions were very satisfactory.

Peshawar District.—The general health of the troops at Peshawar was good, and a great improvement on that in the preceding year, principally due to the decrease in prevalence of ague, which caused but little more than half the number of admissions it did in 1890. The general sanitary condition of the barracks was good, and there was no diseases prevalent which was traceable to defects in sanitation. The barracks are all well ventilated, and give sufficient accommodation. The married quarters are, it is reported, also very good and well suited for the purpose. The station hospital was in good order, and there was no overcrowding; the ventilation was sufficient, and the warming of the wards in the cold months was carefully attended to, good fires being kept, and thick purdahs placed over the doors to prevent draughts. At Nowshera, also, there was a considerable diminution of the sick rate among the troops as compared with that in the preceding year. The sanitary condition of the barracks was in every respect satisfactory. There was nothing connected with the housing, means of ablution, food, or cooking, or the duties of the troops that could be in any way suspected of being injurious to health. The strictest sanitary supervision was exercised over the lines occupied by the troops, and over the bazars as well as over the vicinity of cantonments generally. Any defects brought to light were at once remedied. In common with other places in the Punjab Nowshera was visited in April by swarms of locusts, which destroyed almost every scrap of vegetation. Efforts to destroy them was ineffectual, and it was not until the end of May that they took their departure. At Cherat the conservancy arrangements were defective. The medical officer remarks that the present system has been in force for three years, and appeared to be sufficient, but the experience of 1891 showed that it was unequal to the strain imposed by the importation of enteric fever on a large scale. It was not advisable that any radical change should be undertaken during the season, but afterwards thorough improvements were suggested, including, if possible, that excreta and refuse should be removed from the hill by means of a wire tramway. The hospital accommodation is entirely inadequate. One wooden hut is the only building suitable, and tents were largely used; but plans for a new hospital with subsidiary buildings have been approved. Lavatory and kitchen accommodation is almost entirely absent, temporary structures only being used. The water supply was of excellent quality, but the quantity was at times insufficient, owing to defective transport arrangements.

Quetta District.—The health of the garrison was not satisfactory, due, doubtless, in great measure to the severe winter; also to the fact that one of the regiments had recently arrived and suffered greatly from ague. It is said that men appear to require to be acclimatized to Quetta, and do better in their second year. The medical officer in charge thinks that the greatly improved water supply may account for the marked decrease in the number of enteric fever cases. In the year under report it was found that in nearly all the cases the men attacked had been frequenting the bazar, or drinking from open water channels when out shooting. There were two fatal cases among officers who occupied the same building, which was in a defective sanitary condition; these quarters have been entirely reconstructed. The outbreak of cholera first showed itself in an insanitary collection of buildings near the church under erection, and passed on to some cookhouses, which at the time were in a very insanitary state. These have since been entirely reconstructed, new floors laid down, and the catchpit system replaced by iron receptacles. There was some over crowding in the hospital during the prevalence of malarial fever. The verandahs, and also tents, were used as much as possible. A new hospital for women and children was completed during the year, and the old one taken into use for men, with one ward kept for officers. A large hospital storekeeper's block was also built, but additional quarters for medical warrant officers are still required. As change from the climate of Quetta is considered the only effectual remedy for men suffering from the ague so prevalent at the end of summer, a considerable number were sent to Karachi and Sibi, with good results.

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II.—MADRAS.

Madras.

The average strength of warrant officers, non-commissioned officers and men during the year was 13,256, a decline of 295 from the number during the previous year.

The following table shows the more important of the health statistics of the troops during the year :—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratios per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally discharged.	Constantly Sick.
13,256	17,199	188	8	196	415	218	1105·22	1297·4	14·78	31·31	16·44	83·37

Comparing the above with the corresponding results in the preceding year, a decline of 111·8 per 1,000 has occurred in the ratio of admission and one of 5·34 in that of constantly sick, but in the mortality rate there is an increase of 1·71, and compared with similar average ratios for the previous ten years an increase has occurred in all these ratios, being 48·0 in that of admission, 1·18 in that of death, and 10·68 in that of constant inefficiency through sickness. With regard to this decennial comparison it must be pointed out that the figures for the year under report and for the two preceding years include the sickness and mortality among the troops in Upper Burma, which those for previous years did not. The average sick time to each soldier was 30·43 days, which is shorter than the corresponding period in the previous year by 1·95 days, but longer than the average period for the preceding ten years by 3·90 days. The average duration of each case of sickness was 23·45 days, which is about half a day longer than the similar period in the previous year, and longer than the decennial average period by 2·21 days.

The loss to the Command by death and invaliding to England was 603 men, as compared with 471 in the previous year, and the loss to the service by death and final discharge as medically unfit for further service was 414, being in the ratio of 31·23 per 1,000 of strength, an increase of 3·11 on the corresponding rate in the preceding year.

A table, taken from the annual report of the Principal Medical Officer, Surgeon-Major-General T. N. Hoysted, showing the most important of the statistics of sickness and mortality in the different districts and stations in the Command, is given in Abstract XXIV. Among the districts the Myingyan and Mandalay district, or Upper Burma, gave the highest admission ratio, 1786·8 per 1,000, the Rangoon district coming next with 1283·8, the Madras district with 1244·7, followed by the Belgaum and Bangalore district with 1219·3, the Southern district with 1149·9, and the Secunderabad district with 957·7 per 1,000. In the previous year the highest and lowest admission rates were also in the Upper Burma and Secunderabad districts respectively. Compared with corresponding ratios in the preceding year, the admission rate in the Myingyan and Mandalay district was the only one showing an increase, and that a slight one, 8·2 per 1,000; all the remaining ratios show a decrease, being as much as 342·4 in the Madras district, 197·9 in the Rangoon district, 174·9 in the Southern district, 171·9 in the Secunderabad district, and 34·0 in the Belgaum and Bangalore district. The highest mortality rate in any district was 19·24 per 1,000 in the Myingyan and Mandalay district, followed by 19·21 in the Madras district, and 13·95 in the Rangoon district; the lowest rate was 5·60 in the Southern district, the next above being 10·31 in the Belgaum and Bangalore district, and 10·37 in the Secunderabad district.

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Madras. In the preceding year the highest death rate was in the Rangoon district, and the lowest in the Southern district. Compared with corresponding ratios in the previous year, the death rate in the Rangoon district has declined by 6·57, but all the remainder have increased, that in the Belgaum and Bangalore district by 4·77, that in the Myingyan and Mandalay district by 3·01, that in the Secunderabad district by 2·13, that in the Madras district by ·93, and that in the Southern district by ·27.

With regard to stations, excluding those whose average annual strength was below 100 men, it is found that the highest admission rate was 2046·3 per 1,000 in Myingyan, is in excess of the corresponding rate in the previous year by 491·1, and above the average rate of the preceding three years by 141·9; the ratio next in order was 2004·0 per 1,000 at Bhamo, but is lower than that in the preceding year by 288·4, and below the average rate by 972·0; the ratio third in order was 1966·9 per 1,000 at Thayetmyo, an increase of 692·6 on the rate in 1890, and of 678·5 on the decennial average rate. The lowest admission rate was 931·1 per 1,000 among the troops at Wellington, excluding the depôt, and is below the previous year's rate by 291·3, and below the average rate of four years by 216·8; the ratio next above was 957·7 per 1,000, at Secunderabad, a decline of 172·0 from the rate in the previous year, and of 129·2 from the decennial average rate, and then 978·9 per 1,000 at Port Blair, a decrease of 112·0 from the rate in 1890, but above the average rate by 9.2. In the preceding year the highest admission rate was in Bhamo, and the lowest in Port Blair. The highest mortality rate was 27·03 per 1,000 at Myingyan, being greater than that in the previous year by 10·80, but lower than the triennial average rate by 16·68, this was followed by 26·88 per 1,000 at Bernardmyo, above the last year's rate by 5·90, and above the average rate by 5·95, then 24·47 per 1,000 at St. Thomas' Mount, an increase of 17·78 on the rate in 1890, and above the decennial average rate by 13·26. At Cannanore there was no mortality, and at Wellington, excluding the depôt, the ratio was 5·51 per 1,000, an increase of 3·79 on the rate in the preceding year, and of ·49 on the average rate of four years; the ratio next above was 5·66 per 1,000 in Belgaum, an increase of 1·84 on the ratio in 1890, and of ·51 on the average rate of six years. In the preceding year the highest ratio of mortality was in Toungoo, and the lowest, *nil*, in Malapuram. The highest ratio constantly sick was 125·25 per 1,000 at Mandalay, a decrease of 11·68 from the corresponding rate in the previous year, followed by 106·84 in Meiktila, an increase of 13·71, and by 101·25 in Rangoon, a decrease of 24·78; the lowest ratio of constant inefficiency was 35·21 per 1,000 at Port Blair, differing only fractionally from the corresponding rate in the previous year; the next above were 57·65 at Shwebo, and 58·82 at Cannanore, lower than similar rates in the preceding year by 2·05 and 7·84 respectively. In the preceding two years also the highest and lowest ratios of constant inefficiency through sickness were found in Mandalay and Port Blair respectively. Of the convalescent depôts the admission and constantly sick rates at Poonamallee, 195·37, and 231·48 per 1,000, have declined by 755·3, and 42·85, as compared with corresponding rates in the previous year, but the death-rate, 46·29 per 1,000, has increased by 2·05. At Wellington the admission rate, 1308·3 per 1,000, shows a decline of 203·0, the constantly sick rate, 99·19 per 1·000, an increase of 4·60, and the mortality rate was *nil* as compared with 18·02 per 1,000 in the preceding year.

The most important medical statistics of the different arms of the service, and of the several regiments, batteries, or corps which served in the Command during the year will be found in a table taken from the Report of the Principal Medical Officer, and given in Abstract XLII.

In the cavalry the admission rate was 1206·9 per 1,000, an increase of 131·0 on the corresponding rate in the previous year; the constantly sick rate, 74·98 per 1,000, shows a decline of 3·17; in the death rate, 5·07 per 1,000, there was also a fractional decrease. The average sick time to each soldier, 27·37 days, and the average duration of each case of sickness, 22·67 days, are shorter than the corresponding periods in the previous year by 1·15 days and 3·84 days respectively. Of the cavalry regiments the 19th Hussars, stationed at Bangalore for a few weeks at the close of the year on arrival from home, gave the highest annual admission rate, 2136·4, and also the highest annual ratio of constantly sick, 93·26 per 1,000, but there was no mortality. In the 7th Hussars, at Secunderabad for ten months of the year, the annual admission rate

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was 1270·0, and in the 21st Hussars, at Bangalore, it was 973·5 per 1,000. The mortality rates of these two regiments were 4·57 and 6·63, and the constantly sick rates, 72·91 and 72·55 per 1,000 respectively. In the artillery the admission and constantly sick rates, 1223·5 and 83·48 per 1,000, are lower than the corresponding ratios in the preceding year by 237·7 and 9·71 respectively but the mortality rate, 16·91 per 1,000, is higher by 2·48. The average sick time to each soldier, 30·47 days, was less than the corresponding period in the previous year by 3·54 days, but the average duration of each case of sickness, 24·90 days, was longer by 1·62 days. Omitting batteries whose average annual strength was small, below fifty men, the highest admission ratio was 2576·9 per 1,000 in No. 1 Battery, Eastern Division, at Mandalay, which also gave the highest admission rate in the previous year; the next ratios were 1930·5 in No. 2 Mountain Battery, also at Mandalay, and 1750·0 in No. 21 Field Battery at Bellary; the lowest annual admission rate was 533·9 per 1,000 in No. 38 Field Battery at Secunderabad, the next above being 638·3 in No. 22 Battery, Eastern Division, and 669·1 in No. 79 Field Battery, also at Secunderabad. The highest mortality rate was 47·17 per 1,000 in No. 9 Battery, Southern Division, at Rangoon most of the year, the next ratio was 41·66 in No. 2 Mountain Battery, followed by 34·48 in M Battery, Royal Horse Artillery; there was no mortality in Nos. 38 and 79 Field Batteries, and in No. 22 Battery, Eastern Division. The highest ratios of constantly sick were 195·1 per 1,000 in No. 1 Battery, Eastern Division, 143·0 in No. 2 Mountain Battery, and 133·9 in No. 9 Battery, Southern Division; the lowest ratios were 40·51 per 1,000 in No. 38 Field Battery, 49·56 in No. 79 Field Battery, and 57·34 in No. 22 Battery, Eastern Division. In the Royal Engineers the ratio of admission, 294·1 per 1,000, was identical with that in the previous year, but there was an increase in both the mortality and constantly sick rates. The average sick time to each soldier, 9·55 days, and the average duration of each case of sickness, 32·48 days were greater than in 1890. In the infantry the admission rate, 1341·6 per 1,000, has declined by 95·9 from the corresponding rate in the previous year, and the constantly sick rate, 82·81 per 1,000, by 4·82, but the mortality rate, 14·55 per 1,000, has increased by 3·46. The average sick time to each soldier, 30·22 days, was shorter than the similar period in the preceding year by 1·76 days, and the average duration of each case of sickness, 22·52 days, longer by ·27 of a day. Excluding the 1st Battalion Hampshire Regiment, which was only four weeks in the Command, it is found that among the other regiments the 4th Battalion King's Royal Rifle Corps stationed at Thayetmyo, with a detachment at Myingyan, gave the highest admission ratio, 2136·2; the next rate was 1792·0 in the 1st Battalion Duke of Cornwall's Light Infantry at Fort Dufferin, and then 1512·8 in the 2nd Battalion Yorkshire Regiment, at Bangalore; the lowest ratio was 756·4 per 1,000 in the 2nd Battalion Bedfordshire Regiment at Secunderabad, the next above being 957·5 in the 1st Battalion Cheshire Regiment at Thayetmyo and Belgaum, and 1034·9 in the 2nd Battalion Royal Inniskilling Fusiliers at Secunderabad. The highest rate of mortality was 29·41 per 1,000 in the 4th Battalion King's Royal Rifle Corps, the next, 27·68 in the 2nd Battalion Devonshire Regiment at Shwebo, with detachments at Bhamo and Bernardmyo, and then 21·37 in the 2nd Battalion Somersetshire Light Infantry at Fort St. George, with a wing at Bellary; the lowest death rate was 4·24 per 1,000 in the 1st Battalion Cheshire Regiment, the next above being 4·84 in the 2nd Battalion Suffolk Regiment, headquarters at Wellington, and 8·18 in the 2nd Battalion Yorkshire Regiment. The highest ratio of constantly sick was 120·01 per 1,000 in the Duke of Cornwall's Light Infantry, followed by 113·61 in the 2nd Battalion Yorkshire Regiment, and 96·02 in the 4th Battalion King's Royal Rifle Corps; the lowest ratio of constant inefficiency through sickness was 59·12 per 1,000 in the 2nd Battalion Suffolk Regiment, the next above being 61·06 in the 1st Battalion Cheshire Regiment, and 63·81 in the 2nd Battalion Bedfordshire Regiment.

With regard to the influence of age on the sickness and mortality among the troops, it will be seen from the accompanying table that the admission ratio was high among men under 20 years of age, but highest among men between 20 and 25 years of age; in the next quinquennium it decreased a good deal, and in the succeeding periods with still greater rapidity. In the previous year the sequence of ratios was similar. Comparing the ratios with the corresponding results in the preceding year, an increase of 421·5 per 1,000 is

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observed in that among men under 20 years, but in all the other ratios a decrease has occurred, that among men between 20 and 25 years of age being 174·6, and among men in the next quinquennium 165·5. The mortality ratio among men under 20 years of age was low, but among men between 20 and 25 years of age it increased considerably then fractionally in the next age period and considerably in the succeeding one, after which it fell, but only to increase again a good deal in men over 40 years of age. In the previous year the sequence of ratios was the same, but comparing the ratios with the corresponding rates in that year an increase is observed in each case.

Ages.	Average Strength.	Admissions.	Deaths in Command.	Invaliding.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 20 years	504	633	2	8	1255·9	3·97	15·87
From 20 to 24 years	6,632	9,988	93	204	1506·0	14·02	30·76
„ 25 „ 29 „	4,571	5,681	65	164	1242·8	14·22	35·88
„ 30 „ 34 „	1,025	701	18	29	683·9	17·56	28·29
„ 35 „ 39 „	403	165	6	9	404·4	14·71	22·06
Over 40 years	102	31	4	1	303·9	39·22	9·80
Not stated	14	—	—	—	—	—	—
Total	13,256	17,199	188	415	1297·4	14·18	31·31

The next table is calculated to show the influence of service in the country on sickness and mortality among the troops during the year :—

Length of Service.	Average Strength.	Admissions.	Deaths in Command.	Invaliding.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 1 year	1,913	2,821	31	34	1474·6	16·20	17·17
From 1 to 2 years	2,443	3,451	41	68	1412·6	16·78	27·83
„ 2 „ 3 „	2,823	3,548	35	90	1256·8	12·40	31·88
„ 3 „ 4 „	1,756	3,373	18	70	1920·8	10·25	39·86
„ 4 „ 5 „	1,800	1,156	15	47	642·2	8·33	26·11
„ 5 „ 10 „	1,932	2,617	37	95	1354·5	19·15	49·17
10 years and upwards	575	233	11	11	405·2	19·13	19·13
Not stated	14	—	—	—	—	—	—
Total	13,256	17,199	188	415	1297·4	14·18	31·31

The admission ratio among men in their first year of service in India was high, and above the corresponding rate in the previous year. Among men in their second year of service in the country the ratio fell somewhat, and still more among men in their third year, rising considerably among men in their fourth year, and falling very low among men in their fifth year of service in the country, among whom in the preceding year the sick rate reached its highest. Among men between five and ten years' service in the country the admission rate was again rather high, and somewhat in excess of that in the previous year. Among men over ten years' service in India the sick rate was as usual low. The death rates among men in their first and second years of service in India were high, the latter especially, as compared with the corresponding rate in the previous year. The mortality rates fell among men in their third, fourth, and fifth years of service in the country, but increased

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among men between five and ten years' service, and over ten years' service. It is remarkable that the lowest death ratio in the year under report was among men in their fifth year of service, among whom, in the preceding year, the mortality rate was greatest. *Madras.*

In Abstract XXII. will be found the more important health statistics of the troops, arranged according to the different groups and orders of diseases, and in Abstract XXIII. the statistics of sickness and mortality from the various orders of diseases in each of the administrative circles.

GENERAL DISEASES.—*Diseases dependent on Morbid Poisons.*—Under the head of *eruptive fevers* 109 admissions are returned against 9 in the preceding year. The ratio of admission was 8·2 per 1,000. Small-pox caused two admissions as compared with 6 in the previous year, one of the cases occurred at Bellary and the other at Secunderabad; both did well. Seven cases of measles are returned, three at Madras, two at Malapuram, one at Belgaum, and one at Rangoon. 98 cases of epidemic rose rash occurred, all at Bangalore. The disease prevailed in July and August. It is stated that a few cases generally occur in the station every year. The disease was very prevalent in the same barracks five years previously. The remaining admissions for eruptive fevers were two cases of cow-pox.

Enteric Fever caused 141 admissions and 41 deaths, as compared with 126 and 49 respectively in 1890. The ratio of admission was 10·6 per 1,000, an increase of 1·3 on the corresponding rate in the previous year, but fractionally below the similar average rate for the previous five years. The death rate, 3·09 per 1,000, is lower in both these comparisons by ·53 and ·35 respectively. The per-centage of mortality to attack was 29·1, as compared with 38·9 in the preceding year, and with 30·1 the quinquennial average rate. In Abstract XXV. will be found a table taken from the report of the Principal Medical Officer showing the stations at which the admissions for, and deaths from, enteric fever took place in each of the four quarters of the year. It will be observed that the number of attacks in the second and third quarters was in each case 44, but in the former there were 17 deaths and in the latter 12; in the third quarter there were 38 admissions and 12 deaths, and in the first quarter there were 15 attacks, none of them fatal. With regard to the ages of the men attacked by enteric fever the Principal Medical Officer shows that 3 cases, or 5·9 per 1,000 of strength, occurred among men under 20 years of age, 102, or 15·4 per 1,000, among men between 20 and 25 years of age, 32, or 7·0 per 1,000, among men between 25 and 30 years of age, and 4, or 3·9 per 1,000, among men of over 30 years of age. With regard to length of service in the country there were admitted 21 cases, or 11·0 per 1,000 of strength, among men under one year's service in the Command, 51 cases, or 20·9 per 1,000 among men in their second year of service; 31 cases, or 11·0 per 1,000 among men in their third year of service; 23 cases, or 13·1 per 1,000 among men in their fourth year of service; 4, or 2·2 per 1000, in men in their fifth year of service; and 11, or 5·7 per 1,000, in men with over five years' service. The number of stations at which the disease appeared was 14, as compared with 17 in the preceding year; there was also one case among troops on the march. As in the preceding year Bangalore was the station at which the greatest number of cases was recorded; the admissions were 49 in number and deaths 8, as compared with 27 and 8 in the preceding year. Of the cases 18 and 3 deaths occurred in the second quarter of the year, 16 and 3 fatal in the third quarter, 11 and 2 deaths in the fourth quarter, and 4 in the first quarter. With regard to the causation of the disease it is stated that the attacks could not be traced to any insanitary condition of the barracks, and that the disease seemed too general to have been contracted altogether in the bazars and villages. The men were mostly in their second year of service in the country, and as they, comparatively speaking, escaped in the previous year they were liable to attack in the year under report. At Secunderabad there were 33 attacks and 5 deaths, as compared with 15 attacks and 6 deaths in the preceding year. Of the cases 12 occurred in the second, 11 in the third, 6 in the fourth, and 4 in the first quarter. There were 5 cases at the north station hospital, 2 at the central station hospital, and 26 in the south station hospital. The origin of the disease is not satisfactorily accounted for, the barracks being in good sanitary condition, the water supply good, and attention paid to milk and other supplies; many of the cases, however, were, it is believed, contracted in

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Madras. the bazars. In Madras there were 15 admissions and 4 deaths. 5 of the cases occurred in the second and 6 in the third quarter; of the remaining cases 2 were in the first and 2 in the fourth quarter. All the men attacked were similarly placed to the remainder of the troops quartered in Fort St. George; they drank the water common to all troops, and shared the same rations; the milk used by the troops was under strict supervision, and the sanitary conditions generally were good. It is then difficult to assign a cause for the disease; but it is observed that young soldiers and recent arrivals were attacked most. At Mandalay there were 11 admissions and 5 deaths, as compared with 8 attacks and 3 deaths in the previous year. All the cases occurred in the fourth quarter of the year, and were amongst men of the mounted infantry from one barrack-room. It is stated that there was no insanitary condition of this room, nor of the water supply, nor of any particular article of diet the men were known to have eaten, and the duties of the men were the same as those of men of other companies. At Shwebo there were 8 attacks and 4 deaths; 3 of the cases occurred in the second and 5 in the third quarter. At Bernardmyo 5 admissions occurred with 3 deaths. Of these cases three were probably contracted away from the station, and one was contracted while in attendance on a sufferer from this disease. At Toungoo there were 4 cases and 3 deaths. 2 of the cases were in the second and 2 in the third quarter of the year. The cause of the disease could not be traced; the sanitary condition of the cantonment is generally satisfactory, and the water, milk, and food supplies were, it is said, extremely good. At Bellary also there were 4 cases, but only one fatal. Of these, 1 was in the first, 1 in the third, and 2 in the fourth quarter of the year. For none of the cases could any specific cause be traced. At Thayatmyo there were 3 admissions, one with fatal results; for these cases also no definite cause could be determined. At St. Thomas' Mount 2 cases occurred, both of which were fatal. One occurred in the third and the other in the second quarter of the year. Of the two cases, it is said that one was contracted away from the station. At Rangoon also 2 fatal cases occurred, both in the fourth quarter of the year, and it is said that there was nothing special in the circumstances under which the disease was contracted in either case. At Poonamallee there were also 2 admissions but only 1 death. These cases were probably due, it is thought, to impure drinking water. At Myingyan 1 admission and 2 deaths are returned, one case being transferred from elsewhere suffering from the disease. There was one admission, a mild case, at Cannanore, for which it was difficult to account, as there was no reason to suspect the sanitary condition of barracks. A case occurring on the march completes the number of admissions.

Simple Continued Fever was the cause of 937 admissions, being in the ratio of 70·7 per 1,000, which is higher than the corresponding rate in the previous year by 15·6, but lower than the average rate of the preceding five years by 2·0. The ratio constantly sick from this fever was 2·98 per 1,000, an increase of ·82 on the rate in 1890, but below the quinquennial average rate by ·41. The greatest prevalence of these fevers was in the Rangoon district, the ratio being 163·6 per 1000; this rate was followed by 125·4 per 1,000 in the Madras district, 60·5 in the Belgaum and Bangalore district, 54·8 in the Secunderabad district, 33·6 in the Southern district, and 17·4 in the Myingyan and Mandalay district. In the preceding year the highest ratio of prevalence was in the Madras district, and the lowest, as in the year under report, in the Myingyan and Mandalay district. Compared with corresponding ratios in the preceding year, the admission rate in the Rangoon district has increased by 116·3 per 1,000, that in the Presidency district by 37·3, that in the Myingyan and Mandalay district by 3·8, and that in the Belgaum and Bangalore district by 1·3, but in the Southern and Secunderabad districts the admission rates have declined by 34·6 and 22·9 respectively.

Cholera caused 29 admissions and 21 deaths, being in the ratios of 2·2 and 1·58 per 1,000 respectively. In the preceding year there was only one case, and that proved fatal, but taking the average of the previous five years the admission ratio was equal to 1·5 and the death rate to 1·15 per 1,000. In Abstract XXVI. is a table taken from the report of the Principal Medical Officer showing the stations in the Command, at which the admissions and deaths from cholera took place in each of the four quarters of the year. From this it will

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be observed that the greatest incidence of the disease, 15 cases and 11 deaths, was in the second quarter, and the next, 12 attacks, 8 fatal, in the fourth quarter of the year. In the first and third quarters there was only one case respectively, with fatal result in each instance. At Secunderabad there were 13 cases and 9 deaths; of these, 12 cases, 8 fatal, occurred in the month of October. The disease was very prevalent among the native population. Of a party of the Royal Inniskilling Fusiliers returning from the hills, ten men were attacked, with fatal result in eight cases, and two men of the 19th Hussars who arrived in the station shortly afterwards were attacked, but the cases were mild. The remaining case, fatal, occurred in August, and was probably contracted out of barracks. In Bangalore, Mandalay, and Myingyan respectively one case, which terminated fatally, occurred. The remaining 13 cases occurred among troops on the march. Among them were 9 fatal cases, two of which occurred in the Oxfordshire Light Infantry and seven in the King's Royal Rifle Corps in Burma. *Madras.*

Dysentery.—635 admissions and 6 deaths are returned, being in the ratios of 47·9 and ·45 per 1,000 respectively. The admission ratio is higher than that in the previous year by 6·7, but lower than the average rate of five years by 6·0. The death rate is lower in each of these comparisons by ·29 and ·94 respectively. In Abstract XXVII. there is a table taken from the report of the Principal Medical Officer in which is given the prevalence of dysentery in each of the divisions of the Command, and in Abstract XXVIII. there is a table showing the prevalence of, and mortality from, this disease in each quarter of the year. The greatest prevalence of dysentery in any district was in that of Rangoon, where the ratio amounted to 95·0 per 1,000; the next ratio was 57·4 per 1,000 in the Myingyan and Mandalay district, followed by 54·3 in the Southern district, 46·5 in the Madras district, 31·5 in the Secunderabad district, and 25·8 in the Belgaum and Bangalore district. In the previous year also the greatest prevalence of dysentery was in the Rangoon district, and the least in the Belgaum and Bangalore district. Compared with corresponding ratios in the preceding year, there is a decrease of 4·3 per 1,000 in the admission rate in the Madras district; but in the rates of all the other districts an increase is observed, being 16·0 in the Southern district, 11·6 in the Myingyan and Mandalay district, 5·7 in the Secunderabad district, 5·5 in the Rangoon district, and 2·3 in the Belgaum and Bangalore district. The highest ratio of mortality was 1·13 per 1,000 in the Myingyan and Mandalay district, the next ·54, in the Rangoon district, then ·37 in the Secunderabad district, and ·27 in the Bangalore and Belgaum district. All these ratios show an increase except that of Rangoon, as compared with the return for the previous year. In the remaining districts there was no mortality. The admission rate for dysentery among troops on the march was 92·6 per 1,000 as compared with 54·5 in the previous year; there was no mortality in either year. With regard to seasonal prevalence the third quarter of the year gave the highest admission rate, 14·8 per 1,000, the rate in the second quarter being 14·2, that in the fourth quarter 10·7, and that in the first quarter 8·1. In the preceding year also the quarterly ratios of prevalence were in the same order. Compared with corresponding ratios in the preceding year there is an increase in all the rates, being 4·1 in the second, 1·7 in the fourth, ·6 in the first, and ·5 in the third quarter. The highest ratio of mortality was in the fourth quarter, ·16 per 1,000, the next, ·15, in the third quarter, and next, ·08, in both the first and second quarters. In the previous year the highest mortality rate was in the second quarter and the lowest in the first. Compared with corresponding ratios in the previous year there is an increase in the death rates of the first and third quarters, but a decrease in those of the second and fourth.

Influenza, which had been epidemic in the earlier part of the previous year, caused in the year under report 107 admissions, equal to a ratio of 8·1 per 1,000; in 1890 the corresponding rate was 52·8 per 1,000. With the exception of a single case at Cannanore, all the admissions occurred at Thayetmyo, where the disease was almost epidemic in the months of April, May and June. The cases were mostly mild, especially at first, but some were of more severe character and complicated. One case terminated fatally. In the preceding year there were 147 attacks of this disease recorded at Thayetmyo.

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Madras. The remaining admissions in the first sub-group of general diseases were two for mumps.

Malarial Fevers were the cause of 3,314 admissions and 15 deaths, being in the ratios of 250·0 and 1·13 per 1,000 respectively. Compared with corresponding ratios in the preceding year a decline, but of only 6·9, is observed in the rate of admission, while there is an increase, ·24, in the rate of mortality. Compared with similar average ratios for the previous five years there is an increase of 15·8 in the admission rate, and a decrease of ·06 in the death rate. The ratio constantly sick for these fevers was 9·91 per 1,000 as compared with 8·30 in the previous year, and 7·72 per 1,000, the quinquennial average rate. In Abstract XXIII. is given the prevalence of malarial fevers in the different districts. It will be observed that, as in the previous year, by far the greatest prevalence of these fevers was in the Myingyan and Mandalay district, or Upper Burma, the number of admissions being 2,138, and in the Rangoon district there were 297 admissions. The number of admissions in Burma, therefore, 2,435, was, considerably above two-thirds of the total for the whole Presidency. The admission ratio in the Myingyan and Mandalay district was 806·8 per 1,000, and that in the Rangoon district, 159·3 per 1,000; the next ratio, 145·2 was in the Belgaum and Bangalore district, followed by 81·9 in the Madras district, 70·0 in the Southern district, and, lastly, 21·5 in the Secunderabad district. Compared with corresponding ratios in the previous year the admission rate for the Myingyan and Mandalay district has increased by 233·4, but in all the other districts a decrease is observed, being as much as 181·0 in the Rangoon district, 87·4 in the Belgaum and Bangalore district, 25·6 in the Madras district, 9·3 in the Secunderabad district, and 7·7 in the Southern district. With regard to mortality there were 7 deaths, equal to 2·64 per 1,000, in the Myingyan and Mandalay district 3 deaths, or 1·60 per 1,000, in the Rangoon district, and 2 deaths, or 2·02 per 1,000, in the Madras district; in the remaining districts there was no mortality. Comparing the above ratios with those of the preceding year, an increase is observed in all. Among troops on the march there were 114 admissions and 3 deaths, equal to ratios of 659·0 and 17·34 per 1,000. Of the total number of admissions, 3,151 are returned as ague, 85 as remittent fever, and 75 as malarial cachexia. The cases which terminated fatally were 10 of remittent fever and 5 of ague.

Septic Diseases.—7 admissions and 3 deaths are returned. In the previous year there were 6 admissions and 1 death. The cases were one of sloughing ph edæna, and six of erysipelas, of which three terminated fatally.

Venereal Diseases.—There were 1,608 admissions for *primary syphilis*, equal to a ratio of 121·3 per 1,000, which is lower than that in the previous year by 30·0, but higher than the average rate of the preceding five years by 12·9. The average number constantly sick was 10·80 per 1,000, lower than in the previous year by 2·49, but below the average rate by 1·41. Including the sickness from simple venereal ulcer, for which there were 564 admissions and 39·87 constantly sick, the ratio of admission for primary venereal sores was 163·8 per 1,000, which is lower than in the previous year by 40·5, and than the average rate of five years by 15·4. The ratio constantly sick was 13·81 per 1,000, which is also lower in both these comparisons by 3·13 and ·42 respectively. *Secondary syphilis* caused 989 admissions and 3 deaths, including two of invalids after leaving the Command. The ratio of admission, 74·6 per 1,000, is below the corresponding rate in the previous year by 16·5, but above the quinquennial average rate by 24·5 per 1,000. The ratio constantly sick was 8·92 per 1,000, fractionally below the preceding year's rate, but above the five years' average rate by 3·60. *Gonorrhœa* caused 1,684 admissions, and there were 122·24 men constantly sick from this affection. The admission ratio, 127·0 per 1,000, is below the previous year's rate by 10·0, and the average rate of five years by 22·9; the constantly sick rate, 9·22 per 1,000, is also lower in these comparisons by 1·26 and 1·70 respectively. Including all forms of venereal disease the total admission rate was 365·4 per 1,000, which shows a decline of 67·0 from the previous year's rate, and of 13·8 from the quinquennial average rate. The total rate of constant inefficiency from venereal diseases was 31·95 per 1,000, less than the corresponding rate in the previous year by 4·93, but above the average rate by 1·48.

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The comparative prevalence of venereal diseases, not including simple venereal ulcer, in the different districts, is given in Abstract XXIII. With regard to primary syphilis it is shown that the highest ratio was 172·2 per 1,000 in the Rangoon district; the next being 141·4 in the Belgaum and Bangalore district, and 135·9 in the Secunderabad district; the lowest ratio was 65·7 in the Myingyan and Mandalay district, the next above being 102·2 in the Southern district, and 103·1 in the Madras district. In the preceding year also the highest and lowest ratios were in the same districts. Compared with the previous year's return a decrease has occurred in all the admission rates, being 76·7 in the Southern district, 53·1 in the Myingyan and Mandalay district, 28·1 in the Madras district, 23·5 in the Secunderabad district, 14·2 in the Belgaum and Bangalore district, and 1·7 in the Rangoon district. The highest ratio of prevalence of secondary syphilis was 106·6 per 1,000 in the Belgaum and Bangalore district, the next being 73·6 in the Myingyan and Mandalay district, 58·5 in the Rangoon district, 53·2 in the Southern district, 52·6 in the Secunderabad district, and 48·5 in the Madras district. In the preceding year the highest ratio was in the Secunderabad district, and the lowest in the Rangoon district. Compared with corresponding ratios in the preceding year an increase of 30·5 is observed in the ratio for the Belgaum and Bangalore district, but a decrease has occurred in all the other ratios, being 56·3 in that of the Secunderabad district, 42·6 in that of the Southern district, 26·8 in that of the Madras district, 9·3 in that of the Rangoon district, and 3·1 in that of the Myingyan and Mandalay district. Gonorrhœa gave the highest ratio of prevalence, 139·5 per 1,000, in the Madras district, this is followed closely by 137·2 in the Southern district, 134·6 in the Rangoon district, and 134·1 in the Secunderabad district, and then by 123·0 in the Myingyan and Mandalay district, and 122·9 is the Belgaum and Bangalore district. In the previous year the highest ratio of prevalence was in the Myingyan and Mandalay district, but the lowest in the same as in the year under report. Compared with the return for the previous year the admission ratio in the Madras district has increased by 30·9, that in the Belgaum and Bangalore district by 14·9, and that in the Secunderabad district by 15·2. Taking all the above forms of venereal disease together the highest ratio of admission in any district was 371·0 per 1,000 in the Belgaum and Bangalore district, followed by 365·3 in the Rangoon district, 322·6 in the Secunderabad district, 292·7 in the Southern district, 291·2 in the Madras district, and 262·3 in the Myingyan and Mandalay district. In the preceding year the highest ratio was in the Southern district, and the lowest in the Madras district. Compared with corresponding ratios in the preceding year an increase of prevalence equal to 31·3 per 1,000 is observed in the Belgaum and Bangalore district, but a decrease has occurred in the ratios of all other districts, by as much as 169·4 per 1,000 in the Southern district, 125·5 in the Myingyan and Mandalay district, 64·6 in the Secunderabad district, 23·9 in the Madras district, and 22·9 in the Rangoon district. In the depôts the ratio of admission for these diseases was 345·1 per 1,000. *Madras.*

Parasitic diseases caused 18 admissions as compared with 42 in the previous year. Of the admissions 14 were cases of tænia solium.

Scurvy caused one admission against 2 in 1890. The case occurred at Thayetmyo.

Alcoholism.—81 admissions are returned and 2 deaths, as compared with 91 admissions and no death in the previous year. Eleven of the admissions were due to delirium tremens, and the remainder, including the fatal cases, to alcoholism.

Debility, &c.—370 admissions and 1 death are returned. The admission ratio, 27·9 per 1,000, is lower than in the preceding year by 4·1, and than the five years' average by 4·3. The highest ratio of admission in any district was 51·7 in the Myingyan and Mandalay district, the next, 28·3, in the Madras district; the lowest ratio was 15·2 in the Belgaum and Bangalore district, the next above being 15·4 in the Southern district. In the previous year the highest rate was in the Madras district, and the lowest as in the year under report.

Rheumatism in some form caused 482 admissions, equal to a ratio of 36·4 per 1,000, which is below the rate in the previous year by 3·4, but above the average rate of five years by 5·9. Out of the total number of admissions

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Madras. there were only 6 for rheumatic fever. The greatest prevalence of rheumatism was in the Rangoon district, the ratio being 46·1 per 1,000, this was followed by 42·5 in the Madras district, 38·5 in the Secunderabad district, 35·0 in the Southern district, 33·9 in the Belgaum and Bangalore district, and 29·1 in the Myingyan and Mandalay district. In the preceding year also the highest ratio was in the Rangoon district, but the lowest in the Madras district. Compared with corresponding ratios of prevalence in the previous year there is an increase of 12·4 in the rate for the Madras district, and one of 6·6 in that for the Secunderabad district. In the remaining districts decrease is observed, being 10·7 in the Belgaum and Bangalore district, 8·2 in the Myingyan and Mandalay district, 2·3 in the Southern district, and 1·8 in the Rangoon district.

Tubercular Diseases.—36 admissions and 6 deaths are recorded, including 2 of invalids after leaving the Command. The admission and mortality rates, therefore, were 2·7 and ·45 per 1,000 as compared with 3·1 and ·81 in the previous year, and 3·1 and ·78 the average of the preceding five years respectively. All the admissions and all the deaths were due to tubercular disease of the lungs. The greatest prevalence of tubercular disease was in the Madras district, the ratio being 7·1 per 1,000; the next rate was 2·6 in the Secunderabad district, followed by 2·4 in the Belgaum and Bangalore district, 2·1 in the Rangoon district, 1·1 in the Myingyan and Mandalay district, and *nil* in the Southern district. Compared with last year's return there was an increase of admission rate in the Madras, Secunderabad, and Rangoon districts, but a decrease in the remainder.

Other diseases of this group caused 130 admissions and 4 deaths, including that of an invalid. The admission ratio was 9·8 per 1,000, as compared with 9·1 in the preceding year. There were 57 admissions for anæmia, 16 for scrofula, 1 for epithelioma, 1 for diabetes, and the remainder for non-malignant new growth, principally papilloma. The deaths in the country were one from lymphoma, epithelioma, and diabetes respectively, the death of the invalid was from scirrhus of pylorus.

Local Diseases.—*Diseases of the Nervous System* caused 149 admissions and 5 deaths, equal to ratios of 11·3 and ·38 per 1,000 respectively. Compared with corresponding ratios in the previous year an increase of ·4 is observed in the admission rate, and one of ·09 in the death rate, and compared with similar average rates for the preceding five years there is a decrease of ·3 and ·06 respectively in these comparisons. The greatest prevalence of nervous affections in any district was, as in the previous year, in the Madras district, the ratio being 17·2 per 1,000, the next ratio was 16·8 in the Southern district, followed by 11·1, in the Belgaum and Bangalore district, 9·8 in the Myingyan and Mandalay district, 9·6 in the Rangoon district, and 7·4 in the Secunderabad district. Compared with corresponding ratios for the preceding year a decrease is observed in the admission rates of the Madras, Belgaum and Bangalore, and Secunderabad districts, but an increase is observed in the remainder. The admissions for mental diseases were 34 in number, and there was one death. The admission ratio was 2·6 per 1,000, as compared with 1·8 in the previous year, and with 1·7, the quinquennial average rate. Among the remaining admissions were 5 for inflammation of the brain or its membranes, 5 for paralysis, 72 for neuralgia in some form, and 14 for epilepsy. The deaths were 3 from inflammation of the membranes of the brain, 1 from apoplexy, and 1 from mania.

Diseases of the Eye were the cause of 176 admissions, equal to a rate of 13·3 per 1,000, which is below the corresponding rate in the previous year by 1·2, but almost identical with the average rate of the preceding five years. The greatest prevalence of ophthalmic affections was in the Madras district, the rate being 18·2 per 1,000, followed by 17·9 in the Belgaum and Bangalore district, and 15·4 in the Southern district; the lowest admission rate was 4·8, in the Rangoon district, the next above being 9·6 in the Secunderabad district, and 12·8 in the Myingyan and Mandalay district. In the previous year the highest rate was in the Belgaum and Bangalore, and the lowest in the Rangoon district. In the Madras and Secunderabad districts there was an increase of admission rate, but in the remaining districts a decrease. Of the admissions rather more than two thirds were due to some form of conjunctivitis.

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Diseases of other Organs of Special Senses.—The admission ratio for these affections was 13·1 per 1,000, a decline of 1·4 from the last year's rate, but almost identical with the average rate. The highest ratio for these affections was 39·2 per 1,000, in the Southern district, the next, 25·3, in the Madras district; the lowest rate was 8·5, in the Secunderabad district, the next above, 9·5, in the Belgaum and Bangalore district. In the previous year the highest rate was in the Madras district. Compared with 1890 the admission ratios in the Southern, and Myingyan and Mandalay districts have increased, but those in the remaining districts have decreased. There were only 3 admissions for affections of the nose, all the remainder being for aural disease, as many as 141 for inflammation of the external meatus alone. *Madras.*

Diseases of the Circulatory System caused 79 admissions and 6 deaths, including that of an invalid after leaving the Command. The admission rate, 6·0 per 1,000, is below the rate in the previous year by 1·9, and below the average rate of five years by 3·2. The death rate, ·45 per 1,000, is identical with the quinquennial average rate, but above the rate in the previous year by ·23. Among the different districts that of Belgaum and Bangalore gave the highest admission rate, 5·4 per 1,000; the next ratio was 4·9 in the Myingyan and Mandalay district, then 4·8 in the Secunderabad district, 4·0 in the Madras district, 3·7 in the Rangoon district, and 2·8 in the Southern district. In the previous year the highest ratio was in the Madras district. Compared with last year's return the admission rate in the Myingyan and Mandalay district is almost unchanged, but the ratios in all the other districts show a decrease, being as much as 11·0 in the Madras district, 5·6 in the Secunderabad district, 3·7 in the Rangoon district, 2·5 in the Southern district, and 1·2 in the Belgaum and Bangalore district. There was no mortality in the Madras, Southern, or Secunderabad districts, but the ratios in the other districts were ·54 in that of Belgaum and Bangalore, ·54 in that of Rangoon, and ·75 in that of Myingyan and Mandalay. The principal causes of admission were, palpitation 34 cases, valvular disease of the heart 18, and hypertrophy of the heart 14 cases. The deaths in the country were 4 from valvular disease, and 1 from syncope. The death of the invalid was caused by valve disease of heart.

Diseases of the Respiratory System.—378 admissions and 10 deaths are returned, equal to ratios of 28·5 and ·75 per 1,000 respectively. The admission ratio is lower than the corresponding rate in the previous year by 1·7, but above the average rate of the preceding five years by 2·2. The death rate is lower in both these comparisons, by ·43 and ·08 respectively. The highest admission ratio for respiratory affections in any district was 37·2 per 1,000 in the Belgaum and Bangalore district, the next, 30·0, in the Rangoon district, followed by 29·3 in the Madras district, 24·8 in the Secunderabad district, 21·0 in the Southern district, and 20·0 in the Myingyan and Mandalay district. In the previous year the highest admission rate was in the Southern district, and the lowest in the Secunderabad district. Compared with corresponding ratios in the previous year there is an increase of 8·3 in the Secunderabad district, and to a fractional extent in the Rangoon district; in the remaining districts there is a decrease varying from 19·5 in the Southern district to ·2 in the Belgaum and Bangalore district. There was no mortality in the Secunderabad district, but the death rates in the other districts were 3·03 in the Madras district, 1·40 in the Southern district, 1·09 in the Belgaum and Bangalore district, ·54 in the Rangoon district, and ·38 in the Myingyan and Mandalay district. Compared with the previous year there was a decrease in mortality in the Secunderabad, Rangoon, and Myingyan and Mandalay districts, but an increase in the remainder. Bronchitic affections were the chief cause of admission, as many as 309 cases being returned, and among the rest were 32 of pneumonia, 13 of pleurisy, and 7 of pneumonic phthisis. The deaths were 9 from pneumonia and 1 from pleurisy.

Diseases of the Digestive System were the cause of 1,394 admissions and 26 deaths, including that of an invalid who had left the Command, being in the annual ratios of 105·2 and 1·96 per 1,000 respectively. The admission rate is higher than the corresponding rate in the previous year by 2·5, but below the average rate for the preceding five years by 42·6. The mortality is lower in both these comparisons by ·26 and ·66 respectively. The greatest prevalence of digestive diseases in any district was in that of Belgaum and

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Madras.

Bangalore, the ratio being 133·5 per 1,000, followed closely by 131·6 per 1,000 in the Southern district, and then by 90·7 in the Rangoon district, 88·0 in the Madras district, 87·0 in the Secunderabad district, and 81·1 in the Myingyan and Mandalay district. In the previous year the highest rate was in the Madras district and the lowest in the Secunderabad district. Compared with the return for the preceding year a decrease of 66·8 has occurred in the ratio of the Madras district, and one of 36·6 in the Myingyan and Mandalay district, but in the other districts an increase is observed, being 35·8 in that of Belgaum and Bangalore, 26·2 in the Southern, 5·3 in the Secunderabad, and 4·6 in the Rangoon district. Mortality was greatest in the Rangoon district, the ratio being 3·22 per 1,000, the next was 2·72 in the Belgaum and Bangalore district, then 2·02 in the Madras district, and 1·85 in the Secunderabad district, ·75 in the Myingyan and Mandalay district, and *nil* in the Southern district. In the previous year the greatest mortality was in the Madras district, but in the Southern district the death rate was also *nil*. Compared with last year's return a decrease of 3·36 is observed in the mortality rate in the Madras district, and one of 1·09 in the Myingyan and Mandalay district, but there is an increase of 2·17 in the Belgaum and Bangalore district, one of 1·51 in the Rangoon district, and one of ·77 in the Secunderabad district. The principal causes of admission were affections of the mouth and throat 375 cases, dyspepsia 106, enteritis 135, diarrhœa 163, and hepatic diseases 384, including 25 cases of abscess of the liver. The deaths were 18 from hepatic abscess, 3 from hepatitis, and 1 from quinsy, rectal abscess, acute yellow atrophy of the liver, and peritonitis respectively; in addition to these was the death of an invalid from diarrhœa.

In Abstract XXVII. is a table showing the prevalence of, and mortality from, diarrhœa, and hepatitis, and abscess of the liver in each of the divisions of the Command during the year, and in Abstract XXVIII. there is a table showing the prevalence of, and mortality from, these diseases in each quarter of the year. The admission ratio for diarrhœa was 12·3 per 1,000, as compared with 17·0 in the previous year, but there was no mortality. The greatest prevalence of diarrhœa in any district was in the Belgaum and Bangalore district, the ratio being 17·9 per 1,000, in excess of the corresponding rate in the previous year by 11·8; the ratio next in order was 8·9 in the Secunderabad district, 7·2 in the Myingyan and Mandalay district, followed by 6·4 in the Madras district, and also in the Southern district, and ·5 in the Rangoon district; all these ratios show a decrease, that in the Myingyan and Mandalay district as much as 32·3, that in the Rangoon district 18·3, that in the Southern district 5·2, that in the Secunderabad district 5·1, and that in the Madras district 1·3. As in the return for the previous year the second quarter of the year shows the greatest prevalence of this affection, the ratio being 6·1 per 1,000, the next ratio, 2·2, being in the first quarter, then 2·0 in the fourth, and also in the third quarter. The admission rate for hepatitis and abscess of the liver was 8·1, and the death rate 1·51 per 1,000, which are lower than the corresponding ratios in the previous year by 3·8 and ·40 respectively. The highest ratio of prevalence of these diseases in any district was 16·6 per 1,000 in that of Rangoon, the next rate was 8·2 in the Madras district, 8·1 in the Belgaum and Bangalore district, 7·0 in the Secunderabad district, 6·4 in the Southern district, and 4·5 in the Myingyan and Mandalay district. In the preceding year the highest admission rate was in the Madras district and the lowest in that of Secunderabad. Compared with corresponding ratios in the previous year a decrease has occurred in all these rates varying from 11·9 in the Madras district to ·2 in the Secunderabad district. The highest mortality rate was 3·22 per 1,000 in the Rangoon district, followed by 2·17 in the Belgaum and Bangalore district, 1·48 in the Secunderabad district, ·91 in the Madras district, ·38 in the the Myingyan and Mandalay district, and *nil* in the Southern district. In the previous year the highest death rate was in the Myingyan and Mandalay district, and the lowest *nil* in the Southern district. Compared with last year's return the death rate in the Belgaum and Bangalore district has increased by 1·62, that in the Rangoon district by 1·51, and that in the Secunderabad district by ·41, while in the Myingyan and Mandalay district it has decreased by 1·46, and in the Madras district by ·05. With regard to seasonal prevalence the highest ratio was 2·6 per 1,000 in the first quarter of the year, next 2·3 in the third quarter, 2·1 in

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the fourth, and 1·1 in the second quarter. In the preceding year the greatest prevalence of these affections was in the first, and the least in the second quarters of the year. Mortality was highest in the fourth quarter, ·70 per 1,000, next in the third, ·36, then in the first, ·30, and least in the second quarter, ·15 per 1,000. *Madras.*

Diseases of the Lymphatic and Glandular System were the cause of 717 admissions, equal to a ratio of 54·1 per 1,000, which is below the corresponding rate in the previous year by 19·0, but above the average rate of five years by 1·7. The greatest prevalence of these affections in any district was in that of Madras, the ratio being 107·2 per 1,000; the next rate was 66·7 in the Secunderabad district followed by 48·3 in the Myingyan and Mandalay district, 46·4 in the Belgaum and Bangalore district, 42·0 in the Southern district, and 26·8 in the Rangoon district. In the preceding year also the highest and lowest ratios were in the same districts. Compared with last year's return a decrease is observed in the ratios of all the districts varying from 29·1 in the Rangoon district to 4·9 in the Secunderabad district. The principal causes of admission were inflammation and suppuration of the inguinal glands. Among the remainder were 14 cases of splenic disease and 1 of goitre.

Diseases of the Urinary System caused 37 admissions and 6 deaths, being in the ratios of 2·8 and ·45 per 1,000, as compared with 2·4 and ·07 in the previous year, and with 3·0 and ·08 the average ratios of the preceding five years. The highest ratio of prevalence of urinary affections in any district was 4·8 per 1,000 in the Rangoon district, and the lowest 1·5 in the Myingyan and Mandalay district. In the previous year also the Rangoon district gave the highest rate. Among the cases treated were 5 of Bright's disease, and 9 of acute nephritis, cystitis, and incontinence of urine respectively. The deaths were 4 from acute nephritis and 2 from Bright's disease.

Diseases of the Generative System caused 796 admissions or 60·1 per 1,000 a decline of 10·1 from the previous year's rate, and of 33·4 from the average rate. The greatest prevalence of these affections was in the Myingyan and Mandalay district, 100·7 per 1,000, the next in the Madras district 93·0, followed by 72·8 in the Southern district, 43·7 in the Secunderabad district, 38·0 in the Belgaum and Bangalore district, and 36·5 in the Rangoon district. With the exception of that in the Southern district, all these rates show a decrease as compared with corresponding rates in the previous year. The chief causes of admission were simple venereal ulcer, 564 cases, orchitis, 118, and stricture of the urethra 35 cases.

Diseases of the Organs of Locomotion caused 84 admissions, or 6·3 per 1,000, below the rate in the previous year by 2·1, but almost identical with the quinquennial average rate. The highest admission rate in any district was 8·7 per 1,000 in that of Belgaum and Bangalore, and the lowest, 3·3, in the Secunderabad district. Of the admissions more than half were caused by synovitis.

Diseases of the Connective Tissue were the cause of 268 admissions, equal to a ratio of 20·2 per 1,000, which differs only fractionally from the average rate, but is higher than the last year's rate by 2·3. The Rangoon district shows the greatest and the Secunderabad district the least prevalence of these diseases.

Diseases of the Skin caused 910 admissions, being in the ratio of 68·6 per 1,000, which is higher than the rate in the preceding year by 5·6, but lower than the last year's rate by 4·8. By far the highest ratio of prevalence of cutaneous affections was in the Southern district, 142·9 per 1,000, the next being 89·0 in the Madras district, followed by 84·1 in the Myingyan and Mandalay district, 75·6 in the Rangoon district, 54·5 in the Belgaum and Bangalore district, and 44·4 in the Secunderabad district. In the previous year the highest rate was in the Madras district, but the lowest rate also in the Secunderabad district. The most frequent causes of admission were ulcers, boils, eczema, whitlow, and ringworm.

Poisons caused 8 admissions and 2 deaths, as compared with 7 admissions and no death in the previous year. There were three admissions due to the sting of insects, two to poisonous fungi, one case of which proved fatal, one admission for poisoning by tobacco, one for poisoning by fish, and one, which terminated fatally, for poisoning by alcohol.

Injuries caused an admission ratio of 99·8, which is lower than that in the previous year by 1·5, and below the average rate of five years by 16·4; the death

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rate, 2·87 per 1,000 is, however, in excess of that in 1890 by ·14, and very slightly above the average rate. General injuries caused 47 admissions and 28 deaths. 40 of the admissions were the result of heat, sunstroke, or heat apoplexy, also 18 of the deaths. The remaining 7 admissions were due to burns or scalds. There were 9 deaths due to drowning, accidental in eight instances and suicidal in one instance, and the remaining death was caused by judicial hanging. Local injuries caused 1,276 admissions and 9 deaths. Contusions, wounds, sprains, &c., were the chief causes of admission, and among the remainder were 71 cases of fracture and 9 of dislocation. The deaths were three from fracture of the skull, and one from fracture of the spine, with compression of the spinal cord resulting from a fall while performing gymnastic exercises. There were two deaths from compression of the brain, also due to falls. Two men died of gunshot wound, suicidal in one case and homicidal in the other, and one man died from gunshot wound received in action.

Among the surgical operations performed during the year were 3 for excision of the eyeball, 5 of aspiration of liver with fatal result in three instances, and 2 of incision and evacuation of liver abscess, one case being fatal.

Invaliding.—The number of men invalided home during the year was 415, being in the ratio of 31·31 per 1,000, which is higher than the corresponding rate in the previous year by 8·36 and than the average ratio for the preceding ten years by 3·14. The invaliding from different arms of the service, and also from the several corps which served in the Command during the year, will be found in Abstract XLII. In the cavalry it will be observed that the invaliding rate was 27·02 per 1,000, and is higher than the similar rate in the previous year by 9·57; in the artillery the rate was 30·16, an increase of 11·23; and in the infantry the ratio was 26·82, an increase of 3·99. Of the cavalry regiments the 7th Hussars, the greater part of the year at Secunderabad, gave the highest invaliding rate, 30·04, and the 21st Hussars, at Bangalore, the lowest, 29·85 per 1,000. Among batteries of artillery with fair average strength the highest ratio of invaliding was 102·56 per 1,000 in No. 1 Battery, Eastern Division, at Mandalay, the next being 72·99 in No. 76 Field Battery at Belgaum; in M Battery, Royal Horse Artillery, and No. 79 Field Battery, both at Secunderabad; there was no invaliding. Among infantry regiments the highest invaliding rate was 79·80 per 1,000 in the 1st Battalion Duke of Cornwall's Light Infantry at Fort Dufferin; the next being 78·65 in the 1st Battalion Hampshire Regiment at Rangoon; in the 2nd Battalion Suffolk Regiment there was no invaliding, and in the 2nd Battalion Bedfordshire Regiment at Secunderabad the ratio was only 10·03 per 1,000. With regard to the influence of age on invaliding it will be observed from a table given on a previous page that the invaliding rate was low, 15·87 per 1,000, among men under 20 years of age, but was almost twice as much among men between 20 and 25 years of age, and still further increased among men between 25 and 30 years of age; after this age the invaliding rate fell and continued to decrease through the succeeding quinquennia. In the preceding year the sequence of the invaliding ratios was the same, but the ratios were in each instance lower than the corresponding rates in the year under report. With regard to length of service in the country the invaliding ratio among men in their first year was 17·77 per 1,000, but increased among men in their second year and continued to increase until it reached 39·86 per 1,000 among men in their fourth year of service in the country, after which the rate fell among men in their fifth year to increase again among men between five and ten years service and then declined among men over ten years' service in the country. In the preceding year the invaliding rate increased with each year of service up to the third, fell in the fourth, increased in the fifth, after which it declined among men with over five years' service in the country. Comparing the individual ratios with the corresponding rates in the preceding year an increase is observed in all except in that among men in their fifth year of service in the country, in which there was a marked decline. The principal causes of invaliding were dysentery 25 cases, or 1·89 per 1,000, an increase of 1·0 on the corresponding rate in the previous year; malarial fevers, also 1·89 per 1,000, an increase of ·49; secondary syphilis 121 cases, or 9·13 per 1,000, an increase of 3·89; debility 37 cases, or 2·79 per 1,000, an increase of ·28; tubercular

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disease 20 cases, or 1·51 per 1,000, an increase of ·92; diseases of the nervous system 40 cases, or 3·01 per 1,000, an increase of ·36 (including 28 cases of mental disease, or 2·11 per 1,000, an increase of ·27); diseases of the circulatory system 30 cases, or 2·26 per 1,000, an increase of ·56; and diseases of the digestive system 32 cases, or 2·41 per 1,000, an increase of ·64 on the corresponding rate in the previous year. *Madras.*

The number of men finally discharged as medically unfit for further service was 218, being in the ratio of 16·44 per 1,000, an increase of 1·39 on the previous year's rate and of 3·04 on the ten years' average rate. The principal disabilities necessitating final discharge were secondary syphilis 47 cases, or 3·54 per 1,000, an increase of 2·51 on the corresponding rate in the previous year; debility 17 cases, or 1·28 per 1,000, a decline of 1·75; tubercular disease 22 cases, or 1·66 per 1,000, an increase of 1·29; diseases of the nervous system 35 cases, or 2·63 per 1,000, an increase of ·42 (including 23 cases of mental disease, or 1·73 per 1,000, a decline of ·55); and diseases of the circulatory system 26 cases, or 1·96 per 1,000, an increase of ·19 on the corresponding rate in the preceding year.

Officers.—The average strength was 390, and there were 428 cases of illness, and 4 deaths, equal to ratios of 1097·4 and 10·26 per 1,000 respectively, which are higher than the corresponding ratios in the preceding year by 87·1 and 2·55 per 1,000 respectively. The number of officers invalided to England was 54, equal to a ratio of 138·46 per 1,000, which is lower than in the previous year by 18·35. Among the cases treated were two of small-pox at Bangalore, one of which proved fatal. Enteric fever caused 10 attacks of illness, five at Bangalore, two at Secunderabad, and one at Wellington, Rangoon, and Mandalay respectively. Simple continued fever caused 53 illnesses and dysentery 34, but no death. There were 101 cases of malarial fever, of which seventy-nine were ague, fourteen remittent fever, and 8 malarial cachexia. One of the cases of remittent fever proved fatal. There were 19 cases returned as debility, 14 for diseases of the respiratory system, and 9 for diseases of the nervous system. Diseases of the digestive system show as many as 60 cases, of which 25 were hepatic affections. There were 55 cases of injury, including four of concussion of the brain, seven of fractures, and one of sunstroke. In addition to the deaths already mentioned there was one from apoplexy and one from fracture of the skull, the result of a fall from a horse. The causes of invaliding were malarial diseases 16 cases, dysentery 9, debility 9, hepatic disease 7, enteric fever 6, rheumatism 2, and simple continued fever, choroiditis, enteritis, diarrhœa, and heat-stroke respectively.

Women.—The average strength was 792, and there were 759 admissions and 10 deaths, being in the ratios of 958·3 and 12·62 per 1,000 respectively, which are in excess of the ratios for the preceding year by 15·6 and 1·41 respectively. Among the cases in the first sub-group of diseases were one of small-pox at Bangalore, 33 cases of simple continued fever, of which one died, 3 of enteric fever, one fatal, 41 attacks of dysentery, and a fatal case of cholera. There were 60 admissions for malarial disease, including 56 cases of ague, 3 of malarial cachexia, and a fatal case of remittent fever. Debility caused 270 admissions, rheumatism 16, and anæmia 15 admissions. Diseases of the nervous system caused 24 admissions, principally for neuralgic affections, and ophthalmic diseases 22 admissions, all but two for some form of conjunctivitis. Diseases of the circulatory system caused only 2 admissions, but diseases of the respiratory system 41, including 37 of bronchitic affections, 2 of pleurisy, one of pneumonia, and one of pulmonary hæmorrhage. There were 84 admissions for diseases of the digestive system, the principal causes being throat affections, 23 cases, and gastritis, dyspepsia, enteritis, and diarrhœa 11 cases respectively. Diseases of the generative system caused 80 admissions, including 18 cases of abortion. In addition to those already mentioned the following deaths occurred; one from meningitis, paralysis, syncope, pneumonia, heat apoplexy, and child-birth respectively.

Children.—The average strength was 1,502, and there were 1,114 admissions and 80 deaths, being in the ratios of 741·7 and 53·26 per 1,000 respectively. Compared with corresponding ratios in the preceding year there was a decline of 111·8 in the ratio of admission, but an increase of 17·14 in the death rate. There were 26 admissions for eruptive fevers, including 14 cases of measles, one fatal, 2 of scarlet fever, and 10 of varicella. Whooping-cough caused 13

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Madras. admissions and one death. There were 115 cases of simple continued fever, one of which died, and 4 cases of enteric fever. Four attacks of cholera are reported, all fatal, and there were 52 cases of dysentery with 3 deaths. Malarial fevers caused 88 admissions and two deaths; among the cases were 3 of remittent fever. Parasitic diseases show 36 admissions and one death. There were 106 admissions for debility, and among them 9 deaths, and two deaths are recorded as due to immaturity at birth. Tubercular diseases were the cause of 14 admissions and 8 deaths. Among local diseases, affections of the nervous system caused 15 admissions, including 13 for convulsions, of which ten cases proved fatal, 1 for paralysis, and 1 for meningitis, fatal. Ophthalmic affections caused 122 admissions, all but three for some form of conjunctivitis. Diseases of the respiratory system were the cause of 200 admissions, including 193 for bronchitic affections with 7 deaths, 2 cases of croup, 2 of laryngitis one fatal, 2 cases of pneumonia one fatal, and a case of asthma. There were 222 admissions for diseases of the digestive system, the principal causes being teething 108, enteritis 47, and diarrhœa 28. The deaths were 17 from teething, 4 from enteritis, 2 from diarrhœa, 1 from sore throat, and 1 from quinsy. Other local diseases gave but little sickness except 40 cases of cutaneous disease. There were 22 admissions for injuries and 3 deaths, one from rupture of a vein, one from exhaustion, and one from asphyxia from overlying.

Sanitary Conditions.—The following remarks on the sanitary condition of the different districts and stations are taken from the report of the Principal Officer, Surgeon-Major-General T. N. Hoysted.

Madras District.—The general health of the troops was good during the year, and the sanitary condition of the quarters and their accessories generally satisfactory. At Madras the troops are located in Fort St. George. The water in the moat surrounding the fort is stagnant, and though no disease has been directly traced to this condition, the advisability of draining it is under consideration. The barracks are generally good. Certain old buildings had been demolished and others were about to be, which would be advantageous in relieving the crowding of buildings and allow of free percolation of air. The married quarters are inconvenient owing to the distance from the cook-houses; bath-rooms should be provided and water laid on. The latrines were not altogether in a satisfactory sanitary condition, but new ones were about to be constructed. A large recreation room has been set apart for the men, and is found comfortable and suitable. The station hospital affords ample accommodation, but its situation is not good owing to its proximity to the road, in consequence of which it receives in the dry season clouds of dust rendering it difficult to keep clean. The cook-house is too far from the wards. Quarters for medical warrant-officers and hospital subordinates are much required. At St. Thomas' Mount the two new barracks situated a short distance to the south-west of the mound are satisfactory, but the barracks at the eastern foot of the hill are badly situated and remained unused. The kitchens are commodious, and suitable chimneys have been built and certain defects remedied. The drainage consists chiefly of surface drains built of cement, but the system is not perfect. The station hospital is a double-storied building which affords ample accommodation. At Poonamallee the barracks consist of four detached and single-storied blocks running in two parallel lines east and west. They give general satisfaction. The surface drainage system is not satisfactory; the waste water from the plunge-bath and lavatories at the east side of barracks runs into a tank fifty yards east of the barracks, while that from the lavatories on the west is conducted into receptacles and subsequently emptied by buckets. The water for drinking purposes is obtained from a well south of the hospital; the supply is ample, and it is purified for use by boiling and filtration. At Pallaveram the European infantry, while undergoing musketry instruction, use two of the native places of arms as barracks, which afford sufficiently satisfactory accommodation. The baths and lavatories are in good order, well ventilated, and sufficiently commodious.

Southern District.—The general health of the troops in the district is reported to have been good, and the sanitation of the barracks, hospitals, and buildings connected therewith was well looked after. At Wellington six new huts were built on the racecourse hill during the year. They are one-storied stone buildings, arranged in a double row, the front row being on a lower

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level than the back, and seventy yards distant. Each hut accommodates twenty-four men. Three of the guard-room cells have been condemned as unfit for occupation, in consequence of faulty construction and defective ventilation. The married quarters consists of four two-storied buildings of masonry, raised on a plinth three feet high. The upper rooms are large and more cheerful than the lower. In each front room is a cooking stove, but it would be preferable if they had a sufficient number of separate kitchens, as it is impossible for the occupants to keep their principal room neat and clean if cooking has to be carried on in it. The hospital accommodation was insufficient for the strength, and it was necessary for some months to have recourse to tents. In order to obviate this, it has been recommended to extend the east end of No. 2 block, so as to accommodate more patients. The drains inside the barracks square are of masonry, covered in, flushed daily, and well looked after. The water from the kitchen sinks is carried by pipes into these drains, which eventually discharge themselves on the slopes of the hill, a method of disposal which cannot be considered satisfactory. The construction of a main drain to receive and carry off the contents of the barrack drains into the Coonoor river has been under contemplation. At Cannanore the barracks consist of new and old buildings, but only the former are now in occupation. The rooms are large and airy, with double verandahs and covered ways to latrines, washhouses, and ablution rooms. The water supply is from wells sunk into laterite rock. It is of good quality and has been sufficient in quantity. At Calicut the barracks are built of stone and brick, and are roofed with tiles; they are well ventilated and surrounded with verandahs. A new barrack to accommodate thirty men is said to be in course of construction. The transport lines situated about a quarter of a mile from the barracks are insufficiently and improperly drained. The provision of latrines in the vicinity is shown to be much required. A new bakery was completed in the course of the year and taken into use. At Malapuram the barracks are generally in a satisfactory condition, and the hospital is also good and is sufficient for requirements. The hospital cook-house, however, is said to be faulty in construction, smoky, and badly ventilated. A new dry earth store has been constructed at the hospital. *Madras.*

Bangalore and Belgaum District.—The general health of the troops in the division is reported to have been good, and the sanitation of the barracks and buildings to have been generally well attended to, but the following points are noticed:—In Bangalore the situation of the parade and Ulsoor barracks is somewhat objectionable, owing to the proximity of the bazars. In the first-named barrack, there is not sufficient accommodation without using the inner verandahs, and there is an entire absence of surface drainage immediately around these barracks. In the Ulsoor barracks the floors of the barrack rooms are not elevated from the ground, as is the case in the Agram barracks, which are lofty, well ventilated, and satisfactory in every respect. The building set apart for the recreation room of the infantry regiment is well suited for the purpose, and was amply provided with all necessaries. The water supply is derived from the Ulsoor tank, but owing to the close proximity of this tank to the cantonment and bazaars, it is liable to contamination. The supply is abundant, but the quality of the water is, on account of the above-mentioned circumstance, frequently described as suspicious. The north and south station hospitals are both generally satisfactory, and afford sufficient accommodation; their surroundings are also in good sanitary condition, but it is stated that extension of surface drainage around some of the blocks of buildings is necessary. There are no quarters provided for the men of the Army Hospital Native Corps, who consequently are compelled to live at great distances in some cases, and difficulty is therefore experienced in keeping the servants at the hospital to carry out their duties with punctuality. At Belgaum the artillery and infantry barracks are well constructed, double-storied stone buildings, which give ample accommodation and are satisfactory in all respects. The general condition of the drainage throughout the station is said to be satisfactory. The water supply is obtained from wells, is generally of good quality, and the supply is sufficient. At the station hospital the accommodation is generally sufficient for requirements. It is stated that a few isolated wards for special cases would be an improvement, and also a permanent ward for the treatment of infectious cases, in lieu of the temporary grass and bamboo hut

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which now exists. The floors of the verandahs of two wards are made of rammed earth, but stone flags were about to be laid down. In addition to the requirements mentioned above, a ward for the treatment of sick officers is suggested, and also accommodation for nurses. At Bellary the barracks are stone buildings and afford ample accommodation. With regard to drainage, it is stated that shallow stone drains convey the water from the ablution rooms into cemented pits, which are emptied twice a day. The drinking water supply is obtained from a so-called artesian well, situated near the fort in the gap, about two hundred and fifty yards from the artillery lines. It is good in quality and sufficient in quantity. At Ramandroog all the buildings are substantially built. The single men's block has a double verandah. The surrounding ground is dry, and surface drainage is maintained by deep cuttings leading into gullies which fall over precipitous cliffs. The water supply is obtained from two cemented reservoirs on the west side. The water is of good quality, and is said to contain a certain quantity of iron.

Secunderabad District.—The health of the troops was reported to be good. The sanitation of the barracks and quarters was attended to, but some defects were brought to notice. The first infantry barracks consist of large well-ventilated buildings, situated within the entrenchment, and afford ample accommodation. The drainage about the buildings has undergone some improvement during the year. The second infantry barracks are situated outside the entrenchment. The accommodation is insufficient, being only for six hundred men, but two hundred more can be accommodated, if the dining halls are used as dormitories. The cavalry barracks are well constructed granite buildings. It is stated that certain improvements in drainage are necessary in the vicinity of the barracks, and especially at the back of the married quarters, situated behind the stables. The lines occupied by the grass cutters were in a dilapidated condition and required much attention. The water supply is good and is obtained from a deep well, situated in the hollow of some undulating ground in an isolated position, a quarter of a mile from buildings. Pipes are laid from this well to reservoirs, into which the water is pumped and then conveyed to officers' quarters, barracks, and hospitals. Cultivation, both wet and dry, is carried on in proximity to the station, and patches of wet cultivation are found within cantonments where water is collected. Toddy topes are everywhere to be found. From February to the beginning of July the whole place was burnt up, dusty, and dry, and vegetation was scarce. As a rule after the monsoon vegetation is prolific, but for the year under report, owing to the small rain-fall, it was very poor; but by the aid of the commissariat gardens the troops were fairly well supplied with a variety of vegetables. The station hospitals, three in number, give general satisfaction, and are in good working order; the central and north station hospitals being the best, as they afford sufficient accommodation. The south station hospital, however, is not entirely satisfactory, as, though it is a large two-storied building, there are no fitting offices for administration, medical stores, library, or room for special orderlies. The out-buildings also are said to be not at all suitable, and there is no dining hall. Medical officers' quarters and purveyors' quarters and stores are much required. The low surrounding walls require raising so as to prevent constant communication with persons outside. One of the walls between the wards on each storey was built; this was found to be a great improvement, and does not at all interfere with effective ventilation.

Rangoon District.—It is reported that the health of the troops in the district was good, and the sanitation of barracks, hospitals, and out-buildings generally satisfactory. At Rangoon the infantry barracks are on an excellent site, both as regards drainage and ventilation, but the artillery barracks are on a lower plateau, and are of a less modern pattern. Application has been made to connect the blocks of barracks with one another, and also with the recreation room and canteen, by covered ways, so as to enable the men to get about during the very heavy rains, and also during the heat of the day without exposure. Private ablution rooms have been added to the artillery married quarters. The station hospital is quite close to the infantry barracks, and consists of four blocks for men. A separate private house is rented for the hospital for women and children. Quarters for junior medical officers were

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constructed during the year, and accommodation for six sick officers provided in the block which was formerly the female hospital. Accommodation for two nurses is said to be much required. Toungoo is situated on the right bank of the Settany river. The cantonment is on the west bank. The barracks consist of sixteen bungalows, built of wood in two rows. The ventilation is effected by the ridges and eaves and also by doors and windows. Some detached bungalows were erected during the year. The state of the floors of the men's lavatories was found to be damp and objectionable, and was noted for remedy. An officers' hospital containing two beds was opened during the year, and the re-appropriation of a portion of No. 19 barrack for the hospital for women and children was sanctioned. The kitchens for barracks and hospital are brick buildings with zinc roofs; they require some contrivance to prevent smoking. At Meiktila the barracks and hospital are situated on elevated ground, which forms part of the eastern boundary of a large artificial lake formed for irrigation purposes. The canteen, coffee-shop, and reading rooms are all under one roof in a temporary bamboo building, but the earthen floor of this was found to be getting broken up, and the erection of a permanent building was taken into consideration. The hospital is a two-storied permanent wooden building; there is, however, no provision for prisoners, lunatics, sick officers, or women and children; the hospital stores are located under the wards in the main building, which is objectionable. It is stated that quarters for the medical officer in charge would be beneficial. The Army Hospital Native Corps occupy a temporary bamboo hut with boarded floor, but a permanent building for the accommodation of hospital attendants has been sanctioned. The water-supply for all purposes is derived from the large lake; it is of good quality, though open to pollution from surface drainage, washing, and bathing. The water for barracks and hospital is at present conveyed by hand to the filters and tanks, but this method is about to be superseded by a scheme for laying on the water by pipes to all buildings. At Port Blair the barrack is a large and imposing stone building. It affords ample accommodation, the ventilation is excellent, and it is found to be generally satisfactory. The out-buildings consist of a kitchen, wash-house, latrine, and recreation room; most of them were more or less entirely unroofed or dismantled by a cyclone, which passed over the island towards the end of the year, but they have since been repaired. *Madras.*

Myingyan and Mandalay District.—The health of the troops in these districts was, it is stated, satisfactory, and the sanitation of barracks and hospitals well looked after. At Mandalay the cantonment was greatly improved during the year by clearing the scrub and weeding the ground to make a grass farm, metalling some of the roads, planting trees, pulling down some of the native buildings and fences, and by surface drainage. The barracks occupied by the garrison artillery are not good, they are built of teak, but are too close together, and are badly ventilated Those occupied by the mountain battery are better ventilated, but are very warm during the hot season. The infantry barracks are 15 in number, and are commodious. The station hospital consists of three blocks arranged in a row, raised from the ground, and connected by covered ways. A new hospital for women and children was erected somewhat to the north of the station hospital, and is found to be a good and suitable structure. The water supply is from the moat, and, considering its liability to pollution, was of good quality. At Thayetmyo the barracks, built of teak on piles, and with double shingle roofs and verandahs, afford ample accommodation and ventilation. The station hospital is a two-storied building with a high basement, which, as well as the lower story, is built of masonry, but the upper story is built of teak with a double roof. The accommodation was found to be insufficient during a portion of the hot weather, when half a barrack-room in the vicinity was converted into an auxiliary hospital. The female hospital, consisting of two rooms only, was also found to be insufficient, and application was accordingly made for another suite of rooms. At Bhamo the barracks are the usual teak-wood buildings raised on piles; they are well ventilated and afford sufficient accommodation. The hospital is satisfactory generally, but brick floors are required in the store-rooms, a good cooking range is wanted in the kitchen, and a permanent building to house the men of the Army Hospital Native Corps is much desired. At Myingyan there are, it is stated, five barrack-rooms ready for occupation, and others were in course of

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erection. Four of these accommodate fifty men each, and the other a hundred men. They are built of wood, the old ones roofed with shingle, and the new ones with thatch. The huts, which serve as married quarters, are found unsuitable. Officers live, for the most part, in huts made of bamboo matting and roofed with thatch; but permanent quarters were to be provided. There is no regular system of drainage, but the ground immediately around the barrack buildings is kept dry by surface drains. The water supply is from the river, and carried round in carts at expense and inconvenience. The quality is not good, and it requires careful filtering before use. The hospital is of similar construction to the barracks, and affords accommodation for 60 patients. At Shwebo barrack accommodation is sufficient, eight rooms having been built to house 50 men each. The hospital is a good one. It is proposed to provide a recreation and reading room for the use of the patients. Quarters have been built for two medical subordinates, and six quarters have been erected for hospital attendants, but more are yet required. At Bernardmyo there are five barracks, four of wood and one of brick with a thatched roof. The site of the latter is not very good, some low-lying marshy grounds being adjacent. The hospital contains three wards, and it was necessary to make a fourth during the year by partitioning off part of a barrack-room. Glass windows were provided to all the wards, and tarpaulins put down on the floor to prevent upward draught between the plankings. The medical officer in charge is of opinion that this place will make an excellent sanitarium, if a good road is made, the jungles extensively cleared at the halting places, and proper accommodation provided. He thinks the men should be sent up before the rains and be moved as little as possible until the end of the year, as men sent down during the rains always contract malarial fever.

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The average strength of warrant officers, non-commissioned officers, and men during the year was 12,724, being less than the strength in the preceding year by 38. The most important of the statistics of sickness and mortality are shown in the following table :—

1891. Average Strength.	Admissions.	Deaths			Invalids		Average daily Sick.	Ratios per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally discharged.	Constantly Sick.
12,724	17,904	181	7	188	369	193	936·54	1407·1	14·78	29·00	15·17	73·60

Compared with a similar return for the preceding year an increase of 8·7 per 1,000 has occured in the ratio of admission, and one of 4·43 in that of mortality, but the ratio of constant inefficiency through sickness has declined by 4·40 : and compared with corresponding average ratios for the previous ten years a decrease of 6·1 is observed in the admission rate, and an increase of 4·88 in the constantly sick rate; but the mortality rate is almost identical with the average rate. The average sick time to each soldier was 26·86 days, which is shorter than the corresponding period in the previous year by 1·61 days, but longer than the average period for the preceding ten years by 1·78 days. The average duration of each case of sickness was 19·09 days, less than in the year 1890 by 1·27 days, but longer than the decennial average period by 1·34 days.

The loss to the Command by death and invaliding was 550 men, and the loss to the service by death and final discharge as medically unfit for further service was 381 men, equal to a ratio of 29·95 per 1,000 of the strength, an increase of 1·11 on the corresponding ratio for the previous year.

The prevalence of sickness and mortality in the different districts of the Command is shown in a table in Abstract XXX. taken from the report of the Principal Medical Officer, Surgeon-Major-General W. M. Webb. The highest admission rate in any district was 1,899·6 per 1,000 in that of Nagpur; this was followed by 1,626·4 in the Bombay, Deesa, and Aden district, 1,488·5 in the Sind district, 1,296·3 in the Mhow district, and 1,178·4 in the Poona district. In the previous year also the highest and lowest admission ratios were in the Nagpur and Poona districts respectively. Compared with corresponding ratios in 1890 an increase is observed in the rate for the Bombay, Deesa, and Aden district, equal to 177·1 per 1,000, and one in the Nagpur district, equal to 93·6; in all the other districts a decrease occurred, being as much as 158·7 in the Mhow district, 60·7 in the Poona district, and 20·7 in the Sind district. Mortality was highest in the Mhow district, 26·78 per 1,000, next in the Nagpur district, 22·84, followed by the Poona district, 10·93, the Bombay, Deesa, and Aden district 8·95, and the Sind district 4·57. In the previous year the highest death rate was in the Nagpur district, and the lowest in the Poona district. Compared with the corresponding rates in the preceding year the mortality ratio in the Mhow district shows an increase of 13·68, that in the Nagpur district one of 8·32, and that in the Poona district one of 5·59; in the remaining two districts a decrease is observed, being 5·05 in that of Sind and 1·52 in that of Bombay, Deesa, and Aden. The Sanitaria gave an admission rate of 1,321·0, lower than in the previous year by 593·1, and a death rate of 39·77, an increase of 27·50.

The sickness and mortality at the different stations in the Command is shown in Abstract XXXI., in a table, taken from the report of the Principal Medical Officer. Excluding stations with an average strength of under 100

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men, the highest admission ratio was 2110·8 per 1,000 at Aden, above the corresponding rate in the previous year by 592·9, and above the average rate of ten years by as much as 985·4. This high rate of sickness was entirely due to the prevalence of malarial fevers, excluding which there was no great prevalence of sickness. The next ratio was 1952·7 at Kamptee, greater than in the preceding year by 221·9 and than the average rate of the previous two years by 318·5. Malarial fevers were the chief causes of sickness, nearly half the admissions being due to them. The ratio next in order was 1918·8 at Ahmedabad; this was higher than in 1890 by 123·9 and than the decennial average rate by 131·9. Venereal disease and malarial fevers were the prevailing diseases. The lowest admission rate in any station was 904·3 per 1,000 at Deesa, less by 44·4 than the corresponding rate in 1890, which was also a healthy year, and below the average rate of ten years by as much as 619·6. The ratio next above was 905·7 at Kirkee, a decline of 136·9 from the previous year's rate and of 233·1 from the average rate. There was a considerable diminution in the number of cases of venereal disease, nearly a third less. The ratio next above was 1135·7 at Neemuch, which, though above the previous year's rate by 129·3, is below the decennial average rate by 515·6 per 1,000. Ague was more prevalent than in the preceding year, but venereal disease about the same. The highest mortality rate at any station was 54·73 per 1,000 at Nasirabad, an increase of 37·03 on the last year's rate, and of 37·36 on the average rate. Cholera and enteric fever were the chief causes of mortality. The next death-rate was 45·91 per 1,000 at Neemuch, higher than that in the previous year by 39·52, and than the average rate by 27·91. Enteric fever was the cause of more than half the deaths. At Ahmedabad the death-rate was 25·64 per 1,000 as compared with *nil* in the preceding year and above the average rate by 11·67.

The principal statistics of sickness and mortality in the different arms of the service, and in the several regiments which served in the Command during the year, will be found in a table in Abstract XLIII., taken from the report of the Principal Medical Officer. In the cavalry, the average annual strength of which was 566, the admission ratio was 1116·6, the death-rate 14·13, and the constantly sick rate 72·44 per 1,000, which are lower than the corresponding ratios in the previous year by 415·4, 3·87, and 6·56 per 1,000 respectively. The average sick time to each soldier was 26·44 days, which is shorter than the corresponding period in the previous year by 2·39 days, and the average duration of each case of sickness was 23·68 days, longer by 4·86 days than in the previous year. Of the two regiments of cavalry, the 7th and 18th Hussars, stationed at Mhow, for three and ten months respectively, the annual admission ratios were 1163·9 and 1103·6, the annual death-rates 8·20 and 15·76, and the annual constantly sick rates 65·57 and 74·32 per 1,000 respectively. The average annual strength of the artillery was 2,581. The admission ratio, 1332·8 per 1,000, is below the corresponding rate in the previous year by 50·6, and the constantly sick rate, 71·19, has declined by 8·18; but the death-rate, 13 56, has increased also by 8·18. The average sick time to each soldier was 25·98 days, and the average duration of each case of sickness 19·49 days, which are shorter than the corresponding periods in the previous year by 2·99 and 1·45 days respectively. Omitting batteries with small average annual strength the highest admission rate in any battery was 2125·0 per 1,000 in No. 20 Field Battery, quartered at Kamptee, the next were 1926·8 in No. 27 Field Battery at Ahmedabad, and 1810·1 in No. 2 Battery, Western Division, at Kirkee; the lowest rate was 809·5 per 1,000 in R Battery, Royal Horse Artillery, at Kirkee, then 837·8 in No. 72 Field Battery, at Deesa, the next above, 881·9 in No. 35 Field Battery, at Kirkee, and 957·4 in No. 55 Field Battery also at Kirkee. The highest mortality rate was 51·61 per 1,000 in No. 48 Field Battery at Nasirabad, then 50·63 in No. 17 Field Battery at Neemuch, and 40·65 in No. 59 Field Battery also at Neemuch; the remaining mortality rates were a good deal lower, and in nine batteries there was no mortality. The highest ratio of constantly sick was 134·39 per 1,000 in No. 27 Field Battery, the next 127·09 in No. 26 Field Battery, and 100·63 in No. 2 Battery, Western Division; the lowest ratio was 30·45 in No. 72 Field Battery, the next above, 43·69, in No. 15 Battery, Western Division, at Aden, and 47·35 in R Battery Royal Horse Artillery. In the Royal Engineers, with an average strength of only 31, the admission and constantly

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sick rates, 548·4 and 7·74 per 1,000, were below the corresponding ratios in the previous year by 182·4 and ·72 per 1,000 respectively. The average sick time to each soldier was 2·82 days, less than in the previous year by ·27 of a day, and the average duration of each case of sickness 5·15 days, longer than in 1890 by ·92 of a day. In the Infantry, average strength 7,628, the admission ratio was 1489·5 and the death ratio 13·90 per 1,000, which are in excess of the corresponding ratios in the previous year by 50·1 and 5·60 respectively, but the ratio constantly sick, 77·81 per 1,000, shows a decline of 5·39. The average sick time to each soldier and the average duration of each case of sickness were 28·40 days and 19·07 days respectively, being shorter than the corresponding periods in the previous year, the former by 1·91 days and the latter by 2·03 days. Omitting the 1st Battalion Royal Fusiliers, and the 2nd Battalion (King's) Liverpool Regiment, each of which was only a few weeks in the Command, and consequently gave a small average annual strength, there were nine battalions. Of these the 1st Battalion Connaught Rangers, quartered at Aden, gave the highest admission ratio, 2477·1 per 1,000, the 1st Loyal North Lancashire Regiment, stationed at Kamptee, gave the next ratio, 1877·5, and the 2nd Battalion King's Own Yorkshire Light Infantry, at Colaba, the third ratio, 1668·7; the lowest ratio was 1156·7 in the 2nd Battalion Royal Lancaster Regiment, at Ahmednagar, the next above, 1271·2, in the 1st Battalion Worcestershire Regiment, at Poona, and 1282·1 in the 2nd Battalion Gloucestershire Regiment, most of the year at Nasirabad. The highest mortality rate was 45·09 per 1,000 in the 2nd Battalion Gloucestershire Regiment, the next, 23·81, in the 1st Battalion Loyal North Lancashire Regiment, and 14·70 in the 2nd Battalion Lancashire Fusiliers at Poona; the lowest death rate was 3·50 per 1,000 in the 2nd Battalion Royal Dublin Fusiliers, at Karachi, the next above, 4·35, in the 2nd Battalion Middlesex Regiment, at Mhow, and 4·41 in the 2nd Battalion Lancaster Regiment. The highest ratio of constantly sick was 95·61 per 1,000 in the 1st Battalion Worcestershire Regiment, at Poona, followed by 85·11 in the 1st Battalion Connaught Rangers, and 84·56 in the 2nd Battalion King's Own Yorkshire Light Infantry; the lowest ratio was 61·98 per 1,000 in the 2nd Battalion Gloucestershire Regiment, the next above, 69·74, in the 2nd Battalion Royal Dublin Fusiliers, and 74·29 in the 2nd Battalion Royal Lancaster Regiment.

The following table has been prepared to show the influence of age on the sickness, mortality, and invaliding among the troops in the Command during the year:—

Ages.	Average Strength.	Admissions.	Deaths.	Invaliding.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 20 years - -	199	279	4	10	1402·0	20·10	50·25
From 20 to 24 years -	5,385	9,473	102	184	1759·1	18·94	34·17
„ 25 „ 29 „ -	4,904	7,153	60	131	1458·6	12·23	26·71
„ 30 „ 34 „ -	1,005	728	11	33	724·4	10·94	32·83
„ 35 „ 39 „ -	296	199	4	8	672·3	13·51	27·03
40 years and upwards -	78	52	—	3	666·6	—	38·46
Not stated - - -	857	20	—	—	—	—	—
Total - -	12,724	17,904	181	369	1407·1	14·23	29·00

From the above it will be seen that the admission ratio among men under 20 years of age was high, but not so high as that among men between 20 and 25 years of age; the ratio decreased again among men between 25 and 30 years of age, and fell rapidly through the succeeding quinquennia. In the preceding year the sequence of ratios was exactly similar, and the highest ratio was among men between 20 and 25 years of age. Comparing the individual

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ratios with those in the preceding year an increase is observed in the ratio among men under 20 years of age, and in that among men between 20 and 25 years of age, but a decrease has occurred in the ratio among men between 25 and 30 years, and in that among men between 30 and 35 years of age; in the remaining two ratios an increase is noticed. Mortality was highest among men under 20 years of age, fell slightly among men between 20 and 25 years of age, and with greater rapidity during the two succeeding quinquennia of age, but increased slightly among men between 35 and 40 years of age. There is no similarity in the sequence of these ratios with those of the previous year. The ratios in the year under report all show an increase with the exception of that among men between 30 and 35 years of age.

In the succeeding table the sickness, mortality, and invaliding among the troops in the Command during the year is given, as far as possible, according to the length of service in the country:—

Years of Service in the Country.	Average Strength.	Admissions.	Deaths.	Invaliding.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 1 year - -	1,383	2,597	35	37	1912·0	25·87	27·35
From 1 to 2 years -	1,833	2,245	39	60	1224·8	21·28	32·73
„ 2 „ 3 „ -	1,725	2,236	21	63	1296·2	12·17	36·52
„ 3 „ 4 „ -	2,004	2,534	25	70	1264·5	12·47	34·93
„ 4 „ 5 „ -	2,012	3,141	20	59	1561·1	9·94	29·32
„ 5 „ 10 „ -	2,540	4,830	39	71	1901·6	15·35	27·95
„ 10 years and upwards	383	298	2	9	778·1	5·22	23·50
Not stated - -	874	23	—	—	—	—	—
Total - -	12,724	17,904	181	369	1407·1	14·23	29·00

The ratio of admission into hospital among men in their first year of service in the country was, it will be observed from the above table, the highest of all the rates; there was a considerable decline in the ratio of admission in their second year of service in the country, there was no great variation in the rates among men in their third and fourth years of service, but the ratio among men in their fifth year of service increased somewhat, and that among men between five and ten years' service to a considerable extent, after which there was again a decline. In the previous year also the highest ratios were among men in their first year of service and among men between five and ten years' service in the country. Compared with corresponding rates in the preceding year the ratios among men in their first, third, and fifth years of service in the country show an increase, but all other rates a decrease. The highest mortality rate was among men in their first year of service, that among men in their second year being also high, after this period the ratios were much lower, though there was some increase in the rate among men between five and ten years' service in the country. Compared with corresponding ratios in the return for the preceding year all the death rates show an increase except that among men over ten years' service, in which there was a marked decrease.

In Abstract XXIX. are given the admissions, deaths, invaliding, &c. in the different groups and orders of diseases, and in Abstract XXX. the relative prevalence of sickness and mortality in each of the administrative districts.

General Diseases.—*Diseases dependent on Morbid Poisons.*—Under the head of *eruptive fevers* 3 admissions, are returned. One of the admissions was for *small-pox*, and occurred at Colaba. The case did well. In the preceding year there were 7 cases and 1 death, and in 1889 there were 49 cases and 3 deaths. The other cases of eruptive fevers were one of measles and one of chicken-pox.

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Enteric Fever caused 204 admissions and 71 deaths, being in the ratios of 16·0 and 5·58 per 1,000 respectively. The ratio constantly sick was 1·85 per 1,000. Compared with corresponding ratios for the previous year the admission ratio has increased by 5·7, the death rate by 3·70, and the constantly sick rate by ·37, and in comparison with average similar ratios for the preceding five years there is an increase of 2·9 in the admission rate, one of 1·70 in the death rate, and of ·19 in the constantly sick rate. The per-centage of mortality to attack was 34·8 as compared with 18·3 in the previous year, and with 29·5, the average of the preceding five years. In Abstract XXXII. will be found a table taken from the report of the Principal Medical Officer, which shows the stations at which the admissions and deaths from enteric fever took place in each quarter of the year. From this it will be observed that in each of the third and fourth quarters of the year 65 admissions for enteric fever occurred, and that there were 32 deaths in the fourth quarter, and 19 in the third; in the second quarter there were 43 cases and 15 deaths, and in the first 31 cases and 5 deaths. In the preceding year the greatest prevalence and mortality was in the third quarter of the year, next in the first, then in the fourth, and lastly in the second quarter. The number of stations at which the disease appeared was 17 as compared with 16 in the previous year. With regard to the different stations, the Principal Medical Officer states that there was a satisfactory decrease of this disease at Karuptee and Karachi, and a slight increase at Ahmedabad and Deolalee. At Poona, Kirkee, Ahmednagar, Mhow, Nasirabad, and Neemuch there was a large increase in the number of cases. As in the previous year the greatest number of cases in any station was in Poona, 39 with 14 deaths, giving admission and death ratios of 19·2 and 6·90 respectively. The disease was pretty generally spread over the barracks, but no definite cause for it could be traced. At Mhow 38 cases and 10 deaths occurred, as compared with 24 attacks and 6 deaths in the previous year. Five of the cases, two fatal, were, however, among men of a battery of artillery on the march to Neemuch from St. Thomas' Mount, it is said that they probably contracted the disease at Jalna. The majority of the men attacked by the disease had only short service in the country. At Nasirabad there were 37 admissions and 10 deaths; in the previous year there were only 11 cases and 4 deaths. The disease was of a severe type. The medical officer in charge thinks it probable that many of the cases returned as simple continued fever were enteric fever, the symptoms not being strongly marked. He is also of opinion that the increase in the disease may, to some extent, be attributed to the failure of the rains. At Ahmednagar there were 21 admissions and 5 deaths. The disease was most prevalent in April and August, there being seven cases in each of these months. It was not confined to any particular barrack or locality, the twenty-one cases having been admitted from sixteen different barrack rooms, but chiefly attacked young men and recent arrivals. The disease could not be traced to any sanitary defect in barracks, or to water, or milk. At Neemuch there were also 21 cases, but as many as 13 deaths; in the preceding year there was only one case, a fatal one. All the cases but one occurred in the last half of the year, and 15 of the attacks with 10 deaths were in the fourth quarter of the year. The disease could not be attributed to any defects of building, or to impurity of water, milk, or food supply. At Kirkee, where in previous years there have been only two or three cases, 14 admissions and 3 deaths occurred. The majority of the cases occurred in the third quarter of the year; no cause could be discovered, and there was no excess from any particular barrack. None of the men attacked were over three years' service in the country, and only one was over twenty-five years of age. At Kamptee 6 cases and 4 deaths occurred, in 1890 there were 22 cases but only 3 deaths; half the cases occurred in the third quarter of the year. At Ahmedabad there were also 6 cases but only one death; in this instance half the cases occurred in the second quarter of the year. At Karachi there were 5 cases and 2 deaths, while in 1890 there were 16 cases and also 2 deaths, three of these cases occurred in the first quarter of the year. At Deolalee there were 4 cases, 2 fatal, as compared with 3 cases, recoveries, in the previous year. At Purandhar there were 3 cases, 2 fatal; all occurred towards the end of the year; and at Deesa 3 cases, recoveries, which occurred in the first half of the year; at Taragarh there were two admissions and three deaths. There were

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2 admissions with no death at Colaba, a fatal case at Aden and Indore respectively, and a single case which recovered at Chikalda.

Simple continued fever caused 762 admissions and 1 death. The admission ratio, 59·9 per 1,000, is in excess of that in the preceding year by 3·2, but below the corresponding average rate for the previous five years by 20·7 per 1,000. The amount of constant inefficiency from these fevers was equal to 2·57 per 1,000, in excess of that in the previous year by ·29, but below the average rate by ·61. The greatest prevalence of these fevers was in the Nagpur district, the admission ratio being 148·9 per 1,000, a very marked increase on the previous year's rate. The ratio next in order was 91·1 in the Bombay district, followed by 54·1 in Sind, 47·9 in the Poona district, and 14·4 in the Mhow district. Prevalence of these fevers has increased slightly in the Bombay and Mhow districts, but decreased in the Sind and Poona districts.

Cholera.—53 admissions and 33 deaths are recorded as compared with 7 cases, all fatal, in the previous year. The admission ratio was 4·2 and the death rate 2·59 per 1,000 respectively, being in excess of the corresponding average rates of the preceding five years by 2·8 and 1·54. In Abstract XXXIII. will be found a table taken from the report of the Principal Medical Officer showing the stations at which the admissions and deaths from cholera took place in each of the four quarters of the year. It will be observed that the great prevalence of the disease was in third quarter, as many as 48 cases and 29 deaths occurring in it; in the second quarter there were 4 cases and 3 deaths, in the first quarter a single case, fatal, and in the fourth quarter no case. Of the stations attacked Nasirabad showed the greatest number of cases and deaths, 29 and 20 respectively. The first case occurred in the middle of August, the second five days later, after which the disease set in as an epidemic, and terminated about the middle of September. The disease had prevailed extensively in nearly all the villages in the surrounding country, and had caused great mortality in the Nasirabad bazar. At Poona 9 cases, of which 6 were fatal, occurred—the first case at the end of July in the military prison, and the last at the beginning of September in a barrack at Ghorpuri. The origin of the disease could not be directly traced, and there was no connexion between the first case and the subsequent ones, but the disease was epidemic in the city and district. At Neemuch 5 cases and 3 deaths occurred; all the cases were in one battery of artillery. The first case occurred on the 15th August and the last on 5th September. The disease was very prevalent among the native followers and in the bazar. At Deolalee there were 4 admissions and 3 deaths. From the history of these cases there is little doubt that they were all imported from elsewhere. At Chikalda there were also 4 cases, but none of them fatal. The two men last attacked had been in attendance on one of the earlier cases. At Hyderabad an isolated case occurred, which proved fatal. The disease did not exist in the district at the time. At Mhow there was also a single case of cholera, but the man recovered.

Dysentery caused 321 admissions and 6 deaths, being in the ratios of 25·2 and ·47 per 1,000. Compared with corresponding ratios in the previous year an increase of 5·4 is observed in the admission rate, but a decline of ·15 in the death rate, and in comparison with corresponding average rates for the previous five years there is an increase of 4·1 in the ratio of admission and a decrease of ·26 in the rate of mortality. In Abstract XXXIV. there is a table taken from the report of the Principal Medical Officer in which the prevalence of dysentery is shown for each of the administrative districts of the Command, and in Abstract XXXV. there is a table showing the prevalence of, and mortality from, this disease in each quarter of the year. The greatest prevalence of dysentery in any district was in that of Mhow, the admission ratio being 30·8 per 1,000; this was followed by 28·6 in the Sind district, 25·5 in the Poona district, 23·2 in the Bombay district, and 12·9 in the Nagpur district. Compared with corresponding ratios in the preceding year there is an increase of 14·8 in the admission rate for the Poona district, one of 11·9 in that for the Nagpur district, and one of 9·1 in that for the Mhow district. The ratios for the Bombay and Sind districts show a decrease, 5·1 and 9·0 respectively. The highest mortality rate was 1·00 per 1,000 in the Mhow

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district, the next ·99 in the Nagpur district, then ·31 in the Bombay district, ·26 in the Poona district, and *nil* in the Sind district. Compared with last year's return the death rate has increased in the Mhow and Nagpur districts, and decreased in the Sind and Poona districts, but remains unchanged in the Bombay district. As to seasonal prevalence the third quarter of the year gave the highest admission rate, 9·3 per 1,000, the next rate being 7·0 in the fourth quarter, 5·1 in the first, and 3·8 in the second quarter. The sequence of ratios was the same in the two preceding years. Mortality was equal in the second and third quarters of the year, the ratios in each being ·16 per 1,000; in the first and fourth quarters mortality was also equal, the ratio in each being ·08 per 1,000. In the previous year the highest death rate was in the third quarter, followed by the rates in the first, second, and fourth quarters. *Bombay.*

Other diseases of the 1st sub-group caused 33 admissions, equal to 2·6 per 1,000. The cases comprised 27 of influenza, one of which terminated fatally, and 6 of mumps. The majority of the cases occurred in the Bombay district.

Malarial Fevers.—4,638 admissions are returned, also 2 deaths, including that of an invalid after leaving the Command. The ratio of admission was 364·5 per 1,000, an increase of 72·3 on the corresponding rate in the previous year, and one of 43·9 on the average rate of the preceding five years. The death-rate, ·16 per 1,000, is lower in both these comparisons, by ·23 and ·29 respectively. The average number constantly sick from these diseases was 136·37, equal to a ratio of 10·72 per 1,000, in excess of the rate in the previous year by 2·88, and above the average rate by 1·08. The principal cause of admission was ague, 4,555 cases, and there were also 57 cases of remittent fever, and 26 of malarial cachexia. The death in the country was due to remittent fever, and that of the invalid to malarial cachexia. The greatest prevalence of malarial fevers in any district was in that of Nagpur, where the admission rate reached 708·0 per 1,000; the ratio next in order was 472·9 in the Sind district, followed by 437·6 in the Bombay district, 348·2 in the Mhow district, and 189·2 in the Poona district. In the preceding year also the highest and lowest ratios of admission for malarial fevers were in the Nagpur and Poona districts respectively. Compared with corresponding ratios in the preceding year the admission ratio in the Nagpur district shows an increase of 114·7 per 1,000, that in the Sind district an increase of 260·5, that in the Bombay district an increase of 126·5, and that in the Poona district an increase of 76·5; but in the Mhow district the admission rate has declined by 125·9 per 1,000. Among the different stations it is found that the highest admission ratio for malarial fevers was 1154·7 per 1,000 in Aden. At Kamptee the admission rate amounted to 755·9, and at Karachi to 550·2 per 1,000. At Indore the admission rate was 495·6 per 1,000, at Nasirabad 366·9, at Neemuch 347·3, at Satara 335·0, at Mhow 327·3, at Hyderabad 273·4 at Colaba 272·0, at Poona 239·4, at Ahmednagar 162·2, at Ahmedabad 106·8, and at Kirkee 49·5 per 1,000.

Septic Diseases.—9 admissions are returned, equal to a rate of ·7 per 1,000, lower by ·5 than the last year's rate, and below the average rate. All the admissions were due to erysipelas. No death occurred.

Venereal Diseases.—The admissions for *primary syphilis* numbered 1,883, equal to a ratio of 148·0 per 1,000, which is lower than the corresponding ratio in the previous year by 70·0, but above the average rate of the preceding five years by 15·0. The ratio constantly sick from this affection was 11·64 per 1,000, lower than that in the year 1890 by 5·77, but above the quinquennial average rate by 1·27. Including the sickness from simple venereal ulcer, admissions 389, and constantly sick 25·28, the ratio of admission for primary venereal sores was 178·6, and the constantly sick rate 13·63 per 1,000. Compared with corresponding rates in the previous year there is a decline of 65·4 in the admission rate, and one of 5·23 in the constantly sick rate, and compared with average ratios in the preceding five years an increase of 8·1 is observed in the former and one of ·97 in the latter. *Secondary syphilis* was the cause of 665 admissions, and of the death of an invalid after leaving the Command. The admission ratio, 52·3 per 1,000, is lower than that in the previous year by 7·7, but above the quinquennial average by 11·0. The constantly sick rate, 4·43, is also lower than in the preceding year by 3·70, but above the average rate by ·80. *Gonorrhœa,* with 1,964 admissions, gave a ratio of 154·3 per 1,000,

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which is lower than the rate in the previous year by 22·3, and than the average rate of the preceding five years by 14·8. The constantly sick rate, 10·93 per 1,000, is also lower in both these comparisons by 1·55 and ·51 respectively. Including all forms of venereal disease, the total admission ratio amounted to 385·2 per 1,000, which shows a decrease of as much as 95·4 from the corresponding rate in the preceding year, but is in excess of the average rate of the previous five years by 4·3. The total rate of constant inefficiency on account of venereal affections was 29·00 per 1,000; this rate also is lower than the corresponding ratio in 1890 by 7·47, but is above the quinquennial average rate by 1·27.

In Abstract XXX. is shown the prevalence of venereal diseases, except simple venereal ulcer, in the different districts in the Command. The highest ratio of prevalence of primary syphilis was 215·8 per 1,000 in the Poona district, the next, 168·9 in the Bombay district, followed by 144·8 in the Sind district, 80·4 in the Nagpur district, and 34·1 in the Mhow district. In the previous year the highest ratio was in the district of Nagpur, and the lowest in that of Bombay. For secondary syphilis the Bombay district gave the highest admission rate, 74·1 per 1,000, and the Mhow district the lowest, 30·1. The intervening ratios, those of the Nagpur, Sind, and Poona districts, differed but little from each other, being 54·6, 52·1, and 51·3 respectively. In the preceding year the highest ratio was in the Nagpur district, and the lowest in the Mhow district. The greatest prevalence of gonorrhœa was in the Nagpur district, the admission ratio being 179·7 per 1,000, the next being 171·5 in the Poona district, and 170·4 in the Mhow district, followed by 142·0 in the Bombay district, and 99·8 in the Sind district. In 1890 also the Nagpur and Sind districts gave the highest and lowest ratios respectively. Taking syphilis and gonorrhœa together the highest ratio of prevalence was 438·6 per 1,000 in the Poona district, followed by 414·1 in the Nagpur district, 385·1 in the Bombay district, 296·8 in the Sind district, and 234·7 in the Mhow district. In the preceding year the highest ratio of prevalence was in the Nagpur district, and the lowest in the Mhow district. Comparing the ratios in the year under report with the corresponding rates in the previous year an increase of 30·0 per 1,000 is observed in the rate for the Bombay district, but in all the other ratios a decrease has occurred, being as much as 306·8 in the Nagpur district, 165·6 in the Poona district, 101·4 in the Sind district, and 89·7 in the Mhow district.

Parasitic Diseases.—There were 45 admissions, equal to a ratio of 3·5 per 1,000, as compared with 2·7 in the previous year, and with 4·4 the average rate of the preceding five years, more than half the admissions were for tænia solium.

Scurvy caused 7 admissions against 6 in the preceding year. 72 admissions are returned under the head of *alcoholism*, the ratio being 5·7 per 1,000, which differs only by ·1 from the similar rate in the previous year, but is below the average rate by 3·0. Among the cases treated were 4 of delirium tremens.

Debility, &c.—460 admissions are recorded under this head, being in the ratio of 36·2 per 1,000, which is in excess of the last year's rate by 11·4, and above the quinquennial average rate by 5·9. Of the districts that of Bombay gave the highest admission ratio, 59·9 per 1,000, and that of Mhow the lowest, 20·7. The ratios in the Nagpur, Sind, and Poona districts were 44·7, 44·3, and 23·2 respectively. The ratio in the Poona district shows a slight decrease as compared with the previous year's return, but in all the remaining ratios of districts an increase is observed.

Rheumatism.—301 admissions and 1 death are recorded. The admission ratio, 23·7 per 1,000, is lower than in the previous year by 2·9, and below the five years' average rate by 1·6. Out of the total number of admissions there were 44 cases of rheumatic fever, one of which was fatal. With regard to locality the Mhow district showed the highest ratio of prevalence of rheumatic affections 31·5 per 1,000, the next being 25·6 in the Bombay district, followed by 25·4 in the Sind district, 21·8 in the Nagpur district, and 16·1 in the Poona district. In the previous year the greatest prevalence of rheumatism was also in the Mhow district, but the least was in the Nagpur district. Compared with last year's return the ratios in the Sind and Nagpur districts have increased by 2·5 and 2·1, and those in the

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Bombay, Poona, and Mhow districts have decreased by 5·8, 5·3, and 1·9 respectively. *Bombay.*

Tubercular Diseases caused 63 admissions and 9 deaths, including those of two invalids from abroad, being in the ratios of 5·0 and ·71 per 1,000 respectively. The admission ratio is higher than the corresponding rate in the preceding year by ·9 and than the average rate of the previous five years by 1·1, but the death rate shows a decrease in these comparisons, ·46 and ·18 respectively. As in the preceding year the Bombay and Nagpur districts gave the highest and lowest ratios of admission for tubercular affections, being 11·1 and 1·0 respectively, the intermediate ratios were 4·7 in the Mhow district, 3·9 in the Sind district, and 1·6 in the Poona district. Comparing these rates with those for 1890, an increase of 4·6 has occurred in the rate in the Bombay district, and one of ·9 in that in the Sind district; in the Nagpur, Poona, and Mhow districts a decline took place equal to 1·1, ·9, and ·5 respectively. Mortality in the country was greatest in the Bombay district, the rate being ·93 per 1,000, the next rate was ·65 in the Sind district, followed by ·52 in the Poona district, ·33 in the Mhow district, and *nil* in the Nagpur district. In the previous year the highest death rate occurred in the Nagpur district, and there was no mortality in the Sind and Poona districts. All the admissions and deaths, including those of invalids, were due to tubercular disease of the lungs.

Other diseases of this group were the cause of 167 admissions, equal to a ratio of 13·1 per 1,000 as compared with 10·9 per 1,000 in the previous year. Of the total number of admissions 96 were cases of non-malignant new growth, 60 cases of anæmia, 9 of scrofula, and two of diabetes mellitus. There were two deaths of invalids after leaving the Command, one of which was caused by cancer, and the other by diabetes mellitus.

Local Diseases.—*Diseases of the Nervous System.*—There were 161 admissions and 4 deaths, being in the ratios of 12·6 and ·31 per 1,000 respectively. Compared with the corresponding rate in the previous year the admission rate shows a decline of 1·7, and compared with the average rate for the preceding five years one of 1·6. The death rate remains practically unchanged in both these comparisons. The greatest prevalence of nervous diseases in any district was in that of Bombay the ratio being 21·6 per 1,000, the next rate was 19·5 in the Sind district, followed by 11·7 in the Mhow district, 6·0 in the Nagpur district, and 5·2 in the Poona district. In the previous year also the greatest and least prevalence of nervous affections were in the Bombay and Poona districts respectively. Compared with corresponding ratios in last year's return an increase of 4·7 has occurred in the rate in the Sind district, and a fractional one in the Mhow districts. The rates in the remaining districts have declined, that in Nagpur by 5·4, that in Bombay by 3·0, and that in Poona by 2·9. Among the admissions were 40 cases of mental disease, equal to a ratio of 3·1 per 1,000, which is identical with that in the previous year, though slightly below the quinquennial average rate. The remaining admissions included 58 for neuralgia, 16 for epilepsy, 13 for vertigo, 13 for paralysis, 4 for locomotor ataxy, and 4 for inflammation of the brain or its membranes. The deaths were two from cerebral inflammation, one from apoplexy, and one from paraplegia.

Diseases of the Eye caused 174 admissions, or 13·7 per 1,000, above the rate in the previous year by 1·1, but below the average rate of five years by 1·5. Ophthalmic diseases were most prevalent in the Sind district, the ratio being 17·6 per 1,000; the ratios next in order were 16·9 and 16·4 in the Nagpur and Bombay districts respectively, followed by 13·0 in the Poona district and 9·0 in the Mhow district. In the previous year the highest ratio was in the Bombay district and the lowest in the Nagpur district. In the Nagpur, Sind, and Bombay districts the ratios show an increase of 11·7, 10·9, and 1·3 respectively on the last year's rates, but the Mhow district rate has declined by 3·7 and the Poona district rate by 1·7. Of the admissions 115 were for some form of conjunctivitis, 15 for affections of the cornea, 6 for iritis, 7 for nyctalopia, 8 for blepharitis, &c.

Diseases of other Organs of Special Senses.—190 admissions are returned, being in the ratio of 14·9 per 1,000, almost identical with the corresponding rate in the previous year, and absolutely identical with the quinquennial average rate. As has been noticed to be the case in previous years also the

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greatest prevalence of these affections was in the Sind district, the rate being 33·3 per 1,000; in the Nagpur district the rate was 25·8, in the Bombay district 13·9, in the Mhow district 12·7 and in the Poona district 7·8. Compared with last year's return a decrease of admission rate is observed in the Mhow and Poona districts, but an increase has occurred in the remaining districts. Of the admissions 10 were for nasal affections, and the remainder for aural diseases, principally inflammation of the external meatus.

Diseases of the Circulatory System.—There were 163 admissions and 2 deaths. The ratio of admission, 12·8 per 1,000, is higher than in the previous year by 2·6, but fractionally below the quinquennial average rate. The greatest prevalence of affections of the circulatory system was in the Sind and Nagpur districts, the ratio in each case being 22·8 per 1,000; the ratio next in order was 15·4 in the Bombay district, then 9·4 in the Mhow district, and 7·0 in the Poona district. In the preceding year the greatest prevalence was in the Sind district, and the least in the Nagpur district. Compared with the last year's returns the admission rate in the Nagpur district shows an increase of 18·7, that in the Bombay district one of 5·2, and that in the Sind district, one of 2·8. The rates in the Poona and Mhow districts have declined by 2·1 and ·6 respectively. The chief causes of admission were palpitation 94 cases, valvular disease of the heart 49 cases, and varix 8 cases. One of the deaths was due to valvular disease, and the other to fatty degeneration of the heart.

Diseases of the Respiratory System caused 390 admissions and 8 deaths, equal to ratios of 30·7 and ·63 per 1,000 respectively. The admission ratio is lower than the corresponding rate in the previous year by 3·3, but higher than the average rate of the preceding five years by 2·6. The death rate is lower in both these comparisons by ·39 and ·07 respectively. Among the different districts the highest admission rate occurred in the Sind district, 54·1 per 1,000, the next rate was 35·5 in the Mhow district, followed by 25·5 in the Poona district, 25·0 in the Bombay district, and 20·8 in the Nagpur district. In the previous year also the highest and lowest admission ratios were in the Sind and Nagpur districts. Compared with the similar rates in the previous year an increase of 12·5 is observed in the rate in the Nagpur district, and one of 3·8 in that of the Mhow district: in the remaining districts a decrease is observed, being 13·5 in the Bombay district, 6·5 in the Poona district, and 2·1 in the Sind district. Mortality was highest in the Nagpur district, 1·99 per 1,000, next in the Bombay district 1·23, then ·67 in the Mhow district, and *nil* in the remaining districts. Of the admissions nearly five-sixths were due to bronchitis, and among the remainder were 30 cases of pneumonia and 17 of pleurisy. The deaths were 6 from pneumonia, 1 from pneumonic phthisis, and 1 from empyema.

Diseases of the Digestive System caused 1,576 admissions and 14 deaths, including that of an invalid who died after leaving the Command. The admission rate, therefore, was 123·9, and the death rate 1·10 per 1,000, the former being higher than the corresponding rate in the preceding year by 10·1, but lower than the five-year average rate by 5·3, while the latter is lower than the rate in 1890 by ·31, and than the average rate by ·52. The greatest prevalence of diseases of the digestive system was in the Mhow district, the ratio of admission being 153·3 per 1,000; this was followed by 130·1 in the Nagpur district, 123·6 in the Poona district, 108·4 in the Bombay district, and 103·1 in the Sind district. In the preceding year the Sind district gave the highest rate and the Nagpur district the lowest. Compared with the corresponding ratios in that year the rates in the Poona, Mhow, and Nagpur districts show an increase by 34·6, 20·6, and 71·0 respectively, while in the Sind district there is a decline of 70·8 and in the Bombay district one of 14·8. The highest mortality rate was 1·30 per 1,000 in the Poona district, then 1·00 in the Mhow district, ·99 in the Nagpur district, ·93 in the Bombay district, and ·65 in the Sind district. In 1890 the Bombay district gave the highest rate of mortality, and there was no death in the Nagpur district. The principal causes of admission were affections of the mouth and throat 385 cases, dyspepsia 197, diarrhœa 499, and hepatic diseases 295, including 24 cases of abscess of the liver. The deaths in the country were 7 from hepatic abscess, 2 from hepatitis, 2 from diarrhœa, 1 from enteritis, and 1 from cirrhosis of the liver. The death of the invalid was due to abscess of liver. In Abstract XXXIV. will be found a table showing the prevalence of diarrhœa and

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hepatis, including abscess of the liver in each district in the Command, and in Abstract XXXV. the prevalence of, and mortality from, these diseases in each quarter of the year. The admission rate for diarrhœa was 39·2, and the death rate ·16 per 1,000, as compared with 30·6 and ·08 in the preceding year. The greatest prevalence of diarrhœa in any district was in that of Mhow, the ratio being 60·6 per 1,000, this was followed by 37·2 in the Poona district, 32·1 in the Bombay district, 28·8 in the Nagpur district, and 26·7 in the Sind district. In the previous year the greatest prevalence of diarrhœa was in the Sind district, and the least in the Nagpur district, and compared with the return for that year, the ratios in the year under report for the different districts all show an increase except that of Sind which declined considerably. The greatest seasonal prevalence of diarrhœa was in the third quarter of the year, the ratio being 16·9 per 1,000, the next rate was 10·6 in the fourth quarter, followed by 6·4 in the second quarter, and 5·6 in the first quarter. In the previous year the greatest prevalence was also in the third quarter, but the first came next, then the fourth, and lastly the second. Hepatitis and liver abscess gave an admission rate of 11·2, and a death rate of ·71 per 1,000, as compared with 13·7 and ·94 in the previous year. The highest ratio of admission in any district was 15·1 per 1,000 in the Mhow district, the next 12·3 in the Bombay district, followed by 10·4 in the Poona district, 9·9 in the Nagpur, and 5·2 in the Sind district. In the preceding year the highest ratio was also in the Mhow district, and the lowest in the Nagpur district. Compared with the last year's return the ratios in the Nagpur and Poona districts have increased by 2·6 and 1·5, but those in the Bombay, Sind, and Mhow districts have declined by 7·1, 2·9, and 4·5 respectively. Mortality was highest in the Poona district, 1.04 per 1,000, next ·93 in the Bombay district, then ·65 in the Sind district, ·33 in the Mhow district, and *nil* in the Nagpur district. As to seasonal prevalence of hepatic affections the fourth quarter of the year gave the highest ratio of admission, 3·5 per 1,000; the second quarter the next, 3·2; then the first quarter, 2·6, and lastly the third quarter, 1·9. In the previous year the greatest prevalence was also in the fourth quarter, but the least in the second quarter. Mortality was greatest in the fourth quarter, the rate being ·23 per 1,000, this was followed by ·16 in the second and also in the third quarter, and by ·15 in the first quarter. In the previous year the greatest mortality was in the first quarter, and there were no deaths in the second and third quarters. *Bombay.*

Diseases of the Lymphatic and Glandular System.—There were 440 admissions, equal to a ratio of 34·6 per 1,000, which is less than the similar rate in the preceding year by 8·4, though above the five years' average rate by 4·8. The greatest prevalence of these affections was in the Bombay district, the rate being 43·2 per 1,000, followed by 34·7 and 34·6 in the Nagpur and Sind districts respectively, then by 32·5 in the Poona district, and 29·1 in the Mhow district. In the previous year the highest rate was in the Nagpur district, but the lowest also in the Mhow district. Compared with last year's return an increase of 6·0 has occurred in the Mhow district, but there is a decline in the rates of all the other districts, being as much as 31·7 in the case of Nagpur, 17·4 in that of Poona, 8·3 in that of Sind, and 5·5 in that of Bombay. Inflammation of glands was the chief cause of admission, and among the remaining cases were 21 of disease of the spleen.

Diseases of the Urinary System caused 28 admissions and 2 deaths. The admission ratio, 2·2, is higher than that in 1890 by ·7, and than the average rate by ·2. The principal causes of admission were Bright's disease and cystitis. Of the deaths, one was due to Bright's disease, and the other to acute nephritis.

Diseases of the Generative System.—620 admissions are returned, being in the ratio of 48·7 per 1,000. Compared with the rate in the preceding year an increase of 6·0 is observed, but compared with the five years' average rate a decrease of 12·3. Of the districts, that of Mhow gave the highest admission rate, 96·1 per 1,000, the next being 65·5 in that of Bombay. The ratios in the remaining districts were a good deal lower, viz., 21·8 in the Nagpur district, 18·3 in the Sind district, and 18·0 in the Poona district. More than three-fifths of the admissions were due to simple venereal ulcer, and of the remainder the most frequent causes of admission were orchitis 103 cases, balanitis 48, and stricture of the urethra 36 cases.

Diseases of the Organs of Locomotion show 93 admissions, or 7·3 per 1,000 in excess of the previous year's rate by ·5, and of the quinquennial average

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rate by 1·0. Synovitis caused 50 admissions, or more than half the total number; among the remainder were 14 of periostitis, and 5 of arthritis.

Diseases of the Connective Tissue caused 222 admissions, equal to a ratio of 17·4 per 1,000, which is below both the previous year's rate and the average rate of five years by 1·0.

Diseases of the Skin.—There were 768 admissions, being at the rate of 60·4 per 1,000. Compared with the corresponding ratio in the preceding year an increase of 4·3 has occurred, but compared with the average rate a decline of 10·4 is observed. The highest ratio of prevalence of cutaneous affections in any district was 74·4 per 1,000 in Sind, the next 72·5 in the Bombay district, followed by 64·3 in the Mhow district, 60·6 in the Nagpur district, and 42·9 in the Poona district. In the previous year the highest ratio was in the Bombay district, but the lowest also in the Poona district. Compared with last year's return an increase is observed in the ratios of all the different districts. As usual the chief causes of admission were boils, ulcers, whitlows, ringworm, eczema, and itch.

Poisons.—There were 13 admissions and 1 death as compared with 9 admissions and 2 deaths in the previous year. The cases were one of morphia poisoning with fatal result, accidental; four of poisoning by stinging insects, four of poisoned wound; and one of poisoning by fish, scorpion sting, dead animal matter, and morbid secretions respectively.

Injuries.—The admission ratio for injuries was 109·8 per 1,000, an increase of 12·9 on the previous year's rate and of 1·8 on the quinquennial average rate. General injuries caused 38 admissions and 27 deaths. 30 of the admissions were the result of heat, 5 of burns or scalds, and 3 of multiple injury. The deaths were due to heat apoplexy in 11 cases, to multiple injury in 9 cases, to scalds in 3, to sunstroke in 2, and to drowning in 2 cases. Of the cases of multiple injury one was due to an accidental fall at Karachi, and the remaining eight to an accident near Nagpur to a train containing a detachment 1st Battalion Loyal North Lancashire Regiment proceeding to Kamptee. The three deaths from scald also resulted from the same railway accident. The deaths from drowning were accidental. Local injuries caused 1,359 admissions and 3 deaths. The chief causes of admission were contusions, wounds, sprains, and abrasions. The remainder included 81 for fracture, 18 for dislocation, and 10 for gunshot wound. The deaths were one from concussion of the brain; one from gunshot wound, homicidal, a corporal having been shot by a drummer belonging to the same regiment; and one from compound comminuted fracture of the leg, a result of the railway accident alluded to above. Among numerous surgical operations performed during the year were an amputation of the leg on account of compound fracture of both bones; this case terminated fatally; an excision of the shaft of the humerus on account of necrosis, aspiration of liver abscess 9 cases, two fatal, opening and draining abscess of the liver 7 cases with three deaths, paracentesis of the pleura 4 cases, successful, and iridectomy 3 cases with satisfactory results.

Invaliding.—The number of men invalided home during the year was 369, being in the ratio of 29·00 per 1,000, which is fractionally in excess of the corresponding ratio in the previous year but below the average rate for the preceding ten years by 2·82. The invaliding rates for the different arms of the service and for separate corps will be found in a table in Abstract XLIII. In the cavalry the ratio of invaliding was 30·03 per 1,000, an increase of 2·03 on the corresponding rate in the previous year. All the invaliding took place in the 18th Hussars at Mhow, the corps rate being 38·29 per 1,000. In the artillery the invaliding rate was 29·06, which is lower than in 1890 by 7·82. Among separate batteries, excluding those with small average annual strength, the highest invaliding ratio was 81·30 in No. 27 Field Battery, at Ahmedabad, the next 71·43 in No. 18 Battery, Southern Division, at Karachi, then 63·29 in No. 5 Battery, Southern Division, at Aden; the lowest ratio was *nil* in No. 20 Field Battery at Kamptee, the next above being 6·33 in No. 17 Field Battery, at Neemuch, and 6·45 in No. 48 Field Battery, at Nasirabad. In the infantry the invaliding ratio was 29·23 per 1,000, an increase of 1·95 on the corresponding rate in the previous year. Of regiments of infantry, excluding the 1st Battalion Royal Fusiliers, and the 2nd Battalion King's Liverpool Regiment, which were each only a short time in the Command, the highest invaliding ratio was 83·97 per 1,000 in the 1st Battalion Connaught

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Rangers at Aden, the next 47·78 in the 2nd Battalion Royal Dublin Fusiliers at Karachi and 31·56 in the 2nd Battalion Middlesex Regiment at Mhow; the lowest ratio was 11·02 in the 1st Battalion Worcestershire Regiment at Poona, the next above, 11·31, in the 2nd Battalion Lancashire Fusiliers, at Poona chiefly, and 14·99 in the 2nd Battalion King's Own Yorkshire Light Infantry, at Colaba. In tables on a preceding page will be found the ratios of invaliding according to age and according to length of service in the country. As to the former it will be observed that the highest invaliding ratio was 50·25 per 1,000 among men under 20 years of age, among men between 20 and 25 years of age the ratio fell to 34·17, and among men between 25 and 30 years of age to 26·71; after this period there was an increase to 32·83 among men between 30 and 35 years of age, falling to 27·03 among men in the next quinquennium, and rising again to 38·46 among men over 40 years of age. In the previous year there was no great similarity in the sequence of ratios with that in the year under report, and the ratios with the exception of that among men between 20 and 25 years of age, were lower, particularly in the case of men under 20 years of age. As to service in the country the ratio of invaliding among men in their first year was 27·35 per 1,000, rising to 32·73 among men in their second year and to 36·52 among men in their third year; after this period there was a steady decline, the rate among men in their fourth year of service in the country being 34·93, that among men in their fifth year 29·32, that among men between five and ten years' service 27·95, and that among men over ten years' service in the country 23·50. The sequence of ratios in the preceding year was very different to that in the year under report, and the highest ratios of invaliding were among men in their second year of service and among men between five and ten years' service. *Bombay.*

The principal causes of invaliding were dysentery 9 cases, or ·71 per 1,000, an increase of ·24 on the last year's rate; malarial fevers 38 cases, or 2·99 per 1,000, an increase of 1·58; secondary syphilis 23 cases, or 1·81 per 1,000, a decline of 1·72; debility 78 cases, or 6·13 per 1,000, an increase of 1·12; rheumatism 13 cases, or 1·02 per 1,000, an increase of ·08; tubercular disease 21 cases, or 1·65 per 1,000, an increase of ·24; diseases of the nervous system 38 cases, or 2·99 per 1,000, an increase of ·09 (of these 15 cases, or 1·18 per 1,000 were mental affections); diseases of the circulatory system 32 cases, or 2·51 per 1,000, showing no change; diseases of the respiratory system 10 cases, or ·79 per 1,000, a decline of ·15; diseases of the digestive system 20 cases, or 1·57 per 1,000, a decline of ·94; diseases of the organs of locomotion 12 cases, or ·94 per 1,000, a decline of ·39, and injuries 20 cases, or 1·57 per 1,000, an increase of ·32.

The number of men finally discharged as medically unfit for further service was 193, equal to a ratio of 15·17 per 1,000, a decrease of 3·32 from the corresponding rate in the previous year, but above the decennial average rate by 1·59. The principal disabilities necessitating discharge were secondary syphilis 16 cases, or 1·26 per 1,000, a decline of ·38 from the rate in the previous year; debility 26 cases, or 2·04 per 1,000, a decline of 1·33; tubercular disease 11 cases, or ·86 per 1,000, showing no change; diseases of the nervous system 35 cases, or 2·75 per 1,000, an increase of ·33 (of these cases 20, or 1·57 per 1,000 were mental diseases); diseases of the circulatory system 34 cases, or 2·67 per 1,000, a decline of ·07; diseases of the digestive system 11 cases, or ·86 per 1,000, a decrease of ·24, and injuries 11 cases, or ·86 per 1,000, a decrease of ·39.

Officers.—The average strength of officers was 476, and there were 332 attacks of illness, 5 deaths, and 24 officers were invalided home. The ratio of prevalence of sickness was 697·4, a decrease of 208·1 from the corresponding rate in the previous year. The mortality rate was 10·50 per 1,000, and the invaliding rate 50·42 per 1,000, lower than in the year 1890 by 6·45 and 44·01 respectively. Among the cases treated were 1 of diphtheria, 27 of simple continued fever, 6 of enteric fever, 1 of cholera, 19 of dysentery, 67 of malarial fevers, including 15 of remittent fevers, 10 of diseases of the nervous system, 13 of respiratory affections, 58 of disorders of the digestive system, and 31 of injuries. The deaths were one from remittent fever, enteric fever, enteritis, epilepsy, and concussion of the brain respectively. The causes of invaliding were dysentery 5 cases, debility 4 cases, simple continued fever, paralysis, and

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Bombay. ophthalmic affections 2 cases each, and remittent fever, constitutional syphilis, rheumatism, gout, tubercular disease, pneumonia, enteritis, diarrhœa, and fracture one case respectively.

Women.—The average strength was 641, and there were 412 admissions into hospital, and 4 deaths, being in the ratios of 642·7 and 6·24 per 1,000, which are below the corresponding ratios in the preceding year by 44·4 and 15·77 respectively. Among the admissions were 20 cases of simple continued fever, 2 of enteric fever, 1 of cholera, 4 of dysentery, 64 of malarial fevers, (including 6 of remittent fever), 182 of debility, 8 of diseases of the nervous system, 9 of ophthalmic disease, 2 of diseases of the circulatory system, 8 of diseases of the respiratory system, 40 of diseases of the digestive system, 37 of diseases of the generative system, and 4 of injuries. The causes of death were cholera, congestion of the brain, valvular disease of the heart, and peritonitis one case respectively.

Children.—The average strength of children was 1,250, and there were 592 admissions into hospital and 69 deaths. The admission ratio, therefore, was 473·6 per 1,000, an increase of 33·7, and the death rate 55·20 per 1,000, an increase of 7·29 on the corresponding rate in the previous year. Eruptive fevers caused 38 admissions for measles and 12 for chicken-pox. Whooping-cough gave 11 admissions, diphtheria 6, simple continued fever 48, enteric fever 5, and dysentery 14. Malarial fevers gave 85 admissions, of which 5 were cases of remittent fever. There were 5 cases of immaturity at birth, 85 of debility, 4 of tubercular disease, and 5 of anæmia. Among local diseases there were 12 cases of infantile convulsions and 65 of conjunctivitis. Aural affections and diseases of the circulatory system each caused a single admission, but respiratory diseases, chiefly bronchitis, caused 57 admissions, and diseases of the digestive system 99 admissions, more than half being cases of diarrhœa. In the remaining orders of diseases the admissions were not numerous, but there were 14 cases of skin disease and 14 of injury. The deaths were 13 from diarrhœa, 11 from convulsions, 10 from teething, 6 from debility, 4 from immaturity at birth, 4 from diphtheria, 3 from pneumonia, 3 from tubercle, 2 each from measles, simple continued fever, malarial fever, bronchitis, and heat apoplexy, and 1 from enteric fever, dysentery, croup, stomatitis, and jaundice respectively.

Sanitary Conditions.—With regard to the sanitary condition of the different districts and stations, and the health of the troops in them, the following information is taken from the reports of the Principal Medical Officer and the medical officers in charge of station hospitals.

Bombay, Deesa, and Aden District.—Of Colaba it is reported that the sanitary conditions of barracks and hospitals was satisfactory during the year, but better accommodation for warrant medical officers and hospital servants is urgently required. The sanitary state of the foreshore of the peninsula, and of the localities outside the ground under the control of the military authorities remained in the same unsatisfactory condition as heretofore. There was a considerable increase of sickness during the year. In 1890 there was also an increase, but it was principally due to sickly troops passing through from Burma; in the year under report, however, the greater number of admissions came from the garrison itself, malarial fevers and venereal diseases being the principal causes. The former cause was attributed by the medical officer to to the late advent of the monsoon and consequent prolonged hot season. The supply of water to the hospital was good but frequently scanty; it is understood, however, that the supply to Bombay and Colaba would shortly be increased. The accommodation in the hospital is inadequate for requirements during the trooping season. At Deolali the health of the troops was not so good as in the previous year principally owing to venereal affections and malarial fevers. The sanitary condition of barracks and hospitals was very good. The cell accommodation which had been deficient for some years past was increased by the provision of fifteen new cells, and is now sufficient for probable requirements. In the preceding year sanction was given for the erection of suitable quarters for medical warrant officers, and for an additional block of quarters for the Army Hospital Native Corps, but those necessary works had not been taken in hand at the close of the year under report. A laundry attached to the hospital was completed and handed over during the

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year; it is stated that it has been found a great convenience. Improvements were effected in the manner in which butter for the hospital is supplied, the cattle being stabled and fed in the commissariat lines, and the butter made under proper supervision. At Aden the health of the troops was not good, entirely owing to malarial fever, excluding which there was no great prevalence of sickness. The extreme prevalence of malarial fever is said to be have beendue to the excess of rain which fell in spring. The isthmus position was flooded and rendered so unhealthy that it was abandoned for six months. During the year two new blocks of barracks were constructed for the artillery at Steamer Point, and a soldiers' institute and canteen were under construction. The latter when finished will comprise supper room, library, temperance room, and quarters for caterer and librarian; a detached building will contain a billiard room and game room. The artillery patcherries were given up during the year, and the families are now located in a large double story block on the highest site of the barrack ground. No changes of importance were made in the hospital buildings. Plans for a new station hospital at Steamer Point were prepared. This new hospital is much required, the group of buildings at present in use being unsuitable for the purpose, and insufficient for the increased strength of the troops at this position. The general sanitary condition of the barracks and hospital was satisfactory during the year. At Ahmedabad the health of the troops was fairly good except at the latter part of the year when fevers were prevalent probably on account of the irregular rainfall. The sanitary condition of the hospital barracks and lines was satisfactory throughout the year. The water supply for the infantry was found to contain too large an amount of chlorine, but that for the artillery was fair; all water was carefully filtered. The hospital well water was good, but was somewhat deficient in amount owing to the lateness of the monsoon. At Deesa the general health was good, and the sanitary condition of barracks and hospital very good and carefully looked after during the year. A recommendation for increased accommodation for men of the Army Hospital Native Corps was put forward by the medical officer in charge. The sanitary conditions of the sanitarium at Mount Abu were good. The place was only occupied for eight months, the convalescents being sent down to the plains in October to avoid the severe malarial fever usually prevalent after that time. Fresh batches were sent up at the commencement of the hot season. At Butcher Island the sanitary condition of barracks was good. There is no accommodation in hospital for white troops, but any serious cases are sent to the station hospital, Colaba. The convalescent depôt at Khandalla was transferred from the Poona to the Bombay district during the year. It was closed as usual during the rains. The sanitary condition of barracks and hospital was satisfactory, but there is urgent want ofquarters for men of the Army Hospital Native Corps. *Bombay.*

Sind District.—At Karachi the ratio of prevalence of sickness was higher than that in the previous year, but part of the increase was due, it is said, to the admission of men sent to the station from Quetta. The general sanitary state of the barracks and hospital was quite satisfactory during the year, and there was no overcrowding. Some increase of latrine accommodation was made for the guard-room and school-room in the Napier Lines. An upper story and spacious verandah was put in the station hospital, which gives additional accommodation for two officers and twenty-eight beds for men, and also a good office and dispensary in place of the very defective ones existing previously; new quarters have also been built for the native establishment. A depôt was opened in November in connection with the experimental use of Karachi as a port of embarkation and disembarkation of troops coming from or proceeding to Northern India. It was arranged that the sick of troops passing through would be treated at the station hospital or in tents close to it, and equipment for fifty extra beds was supplied; the arrangements are said to have been satisfactory. The sanitarium at Ghizree maintains its character for usefulness. A large number of convalescents were sent there with benefit. The general sanitary condition of the place was satisfactory, and the accommodation was sufficient. The drainage is surface and generally effective except during very heavy rains, which are rare. At Hyderabad the sanitary condition of barracks and hospitals was satisfactory and there was no overcrowding. The recreation and supper rooms were enlarged, add-

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ing considerably to the comfort and health of the men. The garrison cells were also improved and better accommodation provided. The drainage was well attended to. The refuse water from the ablution rooms, cookhouses, and swimming baths is conveyed to a large open brick drain running the whole length of the barracks; this drain goes to irrigate a lucerne garden for the use of the battery at a distance from barracks. The station hospital was generally satisfactory, but there is no separate building suitable for a hospital for women and children; a detached building containing a ward with about four beds is said to be desirable.

Poona District.—The general health of the troops at Poona was inferior to that in the preceding year. Enteric fever was prevalent, and a severe epidemic of cholera occurred in the district and city during the months of July, August, and September, some cases occurring among the troops. The general sanitary condition of the barracks was satisfactory, both at Wanowrie and Ghorpuri there was sufficient accommodation, and the ventilation and lighting sufficient, as a rule. At Ghorpuri the oldest pattern bungalows would be improved as to ventilation by having ridged roofs, as in the auxiliary hospital. The cookhouses are on the whole satisfactory, but there is no chimney to that of the sergeants' mess, and it is consequently difficult to keep clean. The water supply is sufficient, and in quality fairly good. All drinking water is carefully filtered before use, and water for cooking purposes also. With the increased use of filters the medical officers in charge recommended more frequent change and purification of the filtering media. The station hospital was generally satisfactory, but the roof was thought to be unsound and to some extent dangerous; this was represented, and the entire hospital was in consequence re-roofed.

At Kirkee the general health of the troops was very good, notwithstanding a scanty and late monsoon. The admissions, however, for simple continued and enteric fevers were more numerous, though no special cause could be discovered. There was a considerable decrease in the number of admissions for venereal disease, nearly a third less than in the preceding year, believed by the medical officer to have been due to the opening of the cantonment hospital. The sanitary condition of barracks was very good; some overcrowding in the infantry barracks was represented for remedy. The defective arrangements for carrying off the waste water from the bath-rooms and cookhouses was again brought to notice, but want of funds prevented the adoption of remedial measures. Recommendations were made that the receptacles into which the gutters empty themselves should be more frequently emptied, soakage from overflow being consequently prevented; also that the surface drain in front of the servants' quarters should be paved. The sanitary state of the hospital was good; the separate conservancy establishment introduced in the previous year continued to work well. A new followers' hospital, capable of accommodating sixteen patients was completed and taken into use. At Ahmednagar the general health of the troops was good, though there was an increase of malarial fevers; venereal diseases, however, showed a considerable decrease in admissions, attributed here also by the medical officer to the opening of a cantonment hospital. The sanitary conditions of barracks and hospital were generally satisfactory. The barracks afford sufficient accommodation, and no structural alteration was affected during the year. The infantry married quarters are not sufficient for requirements, therefore some families were accommodated in the artillery quarters, where there is ample room. The water supply was good and sufficient; it is noted, however, that the supply seems to be yearly diminishing. A scheme for new waterworks is said to be under consideration. At Satara the health of the troops was good. The barracks in cantonments are in good sanitary condition, but that in the fort is low, badly ventilated, with no outer verandahs, and has a mud floor. It was not built as a barrack, and is very much out of repair. The water supply was sufficient, though the wells were very low at the end of the hot weather; it is stated that pipes were being laid to bring in a supply of good water from Khass. At Purandhur the general sanitary state of the barracks and hospital was satisfactory. One barrack was thought to be unsafe, it was therefore evacuated and taken in hand for repair; there was also some leakage in another room necessitating temporary arrangements. Improvements were made in the surrounding surface drainage. The hospital building is in fair

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repair, but leaked somewhat during the monsoon. Some improvement is necessary in the quarters for hospital servants, also in the cantonment latrines. The general health of the convalescents sent up to this sanitarium was greatly improved, and they generally returned to their stations fit for duty. *Bombay.*

Mhow District.—At Mhow the health of the troops compared favourably with that in the preceding year. Malarial fevers were a good deal less frequent, and taking the whole year there was less venereal disease, though there was a considerable increase towards the end of the period. The sanitary condition of the barracks and hospitals was good. During the rains each year, from the nature of the soil, the ground at the termination of the masonry drains in the infantry barracks becomes much worn away, and some extension of them was recommended. The ventilation of the inner verandahs of the infantry barracks to be used as dormitories is to be improved. Certain re-appropriations took place in the infantry barracks, among which were the conversion of the prisoners' detention room into stores, and some workshops converted into a temperance room. A family barrack block was re-appropriated as a single men's barrack, and a dormitory of the barrack, containing the regimental institute, was also devoted to single men. The general condition of the bazar was improved during the year by the construction of several new drains. At Nasirabad the sick rate among the troops was in excess of that in the previous year, and the mortality was heavy owing to an epidemic of cholera, and the prevalence of enteric fever. The sanitary condition of the barracks and their vicinity was satisfactory, and there was no overcrowding at any time. The drinking water was supplied as usual from the Dilwara well, and was sufficient notwithstanding the failure of the rains. The water from the Danta well, it is said, appears to be improving in quality, and contains less chlorine than formerly. The deficient rainfall led to fodder in the surrounding district becoming scarce, and milk dear, leading to its adulteration. At Neemuch the health of the troops was fairly good. The prevalence of ague was somewhat increased, but that of venereal disease remained about the same. The barracks were in good order during the year; there were no structural alterations, and the accommodation is ample. The married quarters are good and gave satisfaction. At Indore the health of troops was generally good. The prevalent disease was ague of a mild type. The sanitary state of barracks was generally good, with sufficient accommodation, and efficient ventilation. The water supply is from wells in the vicinity of barracks, is ample in quantity and very good in quality. At Khandwa the sanitary condition of the camp and its surroundings was satisfactory. There was no overcrowding, for though there is only accommodation for a limited number when larger parties of troops arrive they are housed in verandahs and tents, and as they, as a rule, only stay from morning until evening, no inconvenience is felt. At Taragarh the sanitary conditions were satisfactory. There was some little difficulty about the water supply, as the well from which the water was obtained in the earlier part of the year ran short, and the well to the west of the station was utilised until it also failed, when a supply was obtained from another source to the north-east. Care was taken that the mussaks were kept properly clean and the water carefully filtered.

Nagpur District.—At Kamptee the general health of the troops was much less satisfactory than in the previous year. Malarial fevers were the prevailing diseases, nearly half the sickness being due to them. They were most prevalent after the rains, and are to be attributed to the general situation of the station, and not to any remediable defects. It is reported that the sanitary condition of the barracks was satisfactory. The accommodation was sufficient, and the cubic space ample. The ventilation and lighting were satisfactory. No structural alterations in barracks were effected during the year. The lavatories and means of ablution were in good order, and the supply of water sufficient. The dry-earth system was fairly carried out, but the medical officer is of opinion that the conservancy establishment authorised is insufficient for its proper performance. The rations for the troops were generally good, but it is said that the baking of the bread was susceptible of improvement. The clothing of the troops was good, and the bedding sufficient. The substitution of coir for straw in filling the mattresses was found to be a great improvement. The hospital was in a satisfactory state, with sufficient accommodation and effective ventilation. The hospital is dependent on a well for

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its water supply, which is, however, good and sufficient. The reconstruction of the lavatory at the station hospital was recommended on sanitary grounds. At Sitabuldi the general health of the troops was good. The prevailing disease was ague. The barracks gave sufficient accommodation, but the roof leaked considerably during the monsoon, which made the rooms damp and unhealthy, but prompt measures were taken to remedy this defect. Recommendation was made that jhamps should be put up to the verandahs to prevent the rain from beating in; this would also prove beneficial in shutting out the sun's rays during the hot weather. The hospital is small, but is in good order, well ventilated, and affords sufficient accommodation for the requirements of the detachment. The water supply is obtained from a fortified well just below the cliff, from which it is pumped up by steam into an underground cistern at the top of the hill, and from this again it is brought up by means of hand-pumps. The water is of good quality and is carefully filtered.

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XIV.—ON THE HEALTH OF THE TROOPS SERVING IN EGYPT.

Sickness and Mortality.

Egypt.

The average strength of British troops serving in Egypt was 3,172 warrant officers, non-commissioned officers, and men. The stations occupied during the year were Cairo and Alexandria. The force consisted of a squadron of the 17th Lancers until October, when it left for England on relief by one of the 1st (King's) Dragoon Guards from India; No. 10 Company, Eastern Division, Royal Artillery, No. 24 Company Royal Engineers, the 1st Battalion Dorsetshire Regiment, Mounted Infantry, detachments Army Service Corps, Medical Staff Corps, Ordnance Store Corps, and Garrison Staff throughout the year; the 2nd Battalion Suffolk Regiment until 11th February, when it left for India, having been relieved by the 1st Battalion Devonshire Regiment from England; the 2nd Battalion Royal Irish Rifles until its departure for Malta, on 21st March, on relief by the 1st Battalion Shropshire Light Infantry from that station, which in its turn on the 1st December proceeded to Hong Kong, having been relieved by the 1st Battalion South Staffordshire Regiment from Gibraltar.

The Principal Medical Officer, Surgeon-Colonel J. Jameson, states that the general health of the troops during the year 1891 was very good, and the mortality was the lowest since the occupation of the country ten years previously. He is of opinion that a great factor in this result was undoubtedly the presence in the Command during the year of seasoned troops. The Dorsetshire Regiment some time abroad, the squadron King's Dragoon Guards coming to the country from India, the 1st Battalion South Staffordshire Regiment from Gibraltar, the 1st Battalion Shropshire Light Infantry from Malta, leaving the 1st Battalion Devonshire Regiment the only one that joined the Command unacclimatised and direct from England.

The more important statistics of sickness, mortality, and invaliding among the troops are given in the following table :—

1891. Average Strength.	Admissions.	Deaths			Invalids		Constantly Sick.	Ratios per 1,000 of Strength.				
		In the Command.	Of Invalids.	Total.	Sent Home.	Finally Discharged.		Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
3,172	3,141	21	2	23	71	55	185·47	990·2	7·25	22·38	17·33	58·47

Compared with a similar table for the preceding year it is observed that the ratio of admission remains almost unchanged, the death rate shows a decrease of 5·22, and the constantly sick rate one of 5·78 per 1,000, but comparing these ratios with the corresponding average rates for the previous eight years a decrease is observed in all, being as much as 233·8 in the case of admission, 21·55 in that of mortality, and 14·78 in that of constant inefficiency through sickness.

The average sick time to each soldier was 21·34 days, which is shorter than the corresponding period in the preceding year by 2·11 days, and than the similar average period in the previous eight years by 5·40 days. The average duration of each case of sickness was 21·55 days, which is less than in the previous year by 2·14 days, and than the average period for eight years by about a third of a day.

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In the subjoined table is shown the amount of sickness and mortality in Cairo and that in Alexandria :—

Stations.	Average Strength.	Admissions.	Deaths.	Ratios per 1,000.	
				Admissions.	Deaths.
Cairo - - - -	2,292	2,101	18	916·7	7·85
Alexandria - - - -	880	1,040	3	1181·8	3·41

As in the previous year the sick ratio is much higher at Alexandria than at Cairo, but the mortality was lower. Comparing the ratios at each station with the corresponding rates in 1890 it is observed that in Cairo the admission rate has increased by 3·5, and the death rate by 1·34, but at Alexandria there was a slight decrease, 3·8, in the ratio of admission, and a very large one, 23·12, in that of mortality, this improved condition of things is due to the comparative immunity of the garrison from enteric fever.

The principal statistics of sickness and mortality for the different arms of the service and for the individual corps which served in the garrison during the year will be found in Abstract XL.

Taking arms of the service the highest admission ratio was, as in the previous year, in the infantry, but shows an increase of 14·4, being 1107·0 per 1,000 ; the ratio next in order was 751·7 in the cavalry, an increase of 21·5 ; then 674·1 in the artillery, a decrease of 42·2 ; followed by 438·8 in the engineers, a decrease of 350·0 ; and by 408·6 in the staff and departments, a a decrease of 68·0. The highest mortality rate was 22·22 per 1,000 in the artillery, dependent on three deaths in a single battery, the next ratio was in the staff and departments, 17·92, followed by 10·20 in the engineers, 6·90 in the cavalry, and 4·37 in the infantry. In the previous year the highest rate was 19·24, in the engineers, and lowest 6·23, in the staff and departments. The constantly sick rate was highest in the infantry, 66·29 per 1,000, next in the artillery 36·67, the cavalry 36·14, the engineers 28·98, and departmental corps 20·54. In the preceding year also the highest rate was in the infantry, and the lowest in the departments, but the rates were somewhat higher, being 72·21 and 27·79 respectively. Among individual corps the highest annual admission rate was 1834·8 per 1,000, in the mounted infantry, followed by 1367·3 in the 1st Battalion Devonshire Regiment ; exclusive of departmental corps the lowest rate was 438·8 in the engineers. The highest annual death rate was, excluding departments, 32·33 per 1,000, in the 1st Dragoon Guards, dependent on a single death in a small average annual strength ; in the Devonshire Regiment the rate was only 1·50 ; and in three corps there was no mortality. Constant inefficiency through sickness was highest in the Devonshire Regiment, 86·43 per 1,000, and lowest, 28·98, in the engineers.

The following table has been compiled to show how the sickness and mortality among the troops may have been influenced by age :—

Ages.	Average Strength.	Admissions.	Deaths in Command.	Invaliding.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 20 years - -	250	347	1	3	1388·0	4·00	12·00
From 20 to 24 years -	1,458	1,770	10	44	1214·0	6·86	30·18
„ 25 „ 29 „ -	1,190	873	9	18	733·6	7·56	15·13
„ 30 „ 35 „ -	207	112	—	5	541·1	—	24·15
„ 35 „ 40 „ -	49	29	1	1	591·8	20·41	20·41
Over 40 years - -	18	10	—	—	555·5	—	—
Total - -	3,172	3,141	21	71	990·2	6·62	22·38

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The highest admission rate, it will be observed, was among men under 20 years of age, that among men between 20 and 25 years being also high; in the next quinquennium the ratio drops a good deal, and still more among men between 30 and 35 years of age, rising again somewhat after that age. In the preceding year also the ratios among men under 20 years and between 20 and 25 years of age were by far the highest, a considerable decline taking place after that time. With regard to mortality the highest ratio, which is found among men between 35 and 40 years of age was due to a single death in a small average strength. Most of the deaths took place among men between 20 and 25 years and 25 and 30 years, but the ratios compare favourably with those in the previous year. *Egypt.*

The next table has been prepared to show the influence of service in the Command on sickness and mortality among the troops during the year:—

Length of Service in Command.	Average Strength.	Admissions.	Deaths in Command.	Invaliding.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Invaliding.
Under 1 year - -	1,751	2,011	12	26	1148·5	6·85	14·85
From 1 to 2 years -	675	540	3	25	800·0	4·44	37·04
„ 2 „ 3 „ -	405	463	1	13	1,143·2	2·47	32·10
„ 3 „ 4 „ -	116	63	1	6	543·1	8·62	51·72
„ 4 „ 5 „ -	81	21	—	1	259·3	—	12·34
Over 5 years - -	144	43	4	—	298·6	27·78	—
Total - -	3,172	3,141	21	71	990·2	6·62	22·38

The admission ratio it is seen from the above was at its highest among men in their first year of service in the Command, fell to a certain extent among men in their second year, but increased again considerably among men in their third year, after which the ratio declined steadily among men in their fourth and fifth years. In the preceding year the sequence of admission ratios was very much the same, but the increase of rate among men in their third year was not so marked. Compared with the return for the preceding year the mortality rate among men in their first year of service was much reduced; the rate still further declined among men in their second and third year of service, rising among men in their fourth year, and among men over five years, while among men in their fifth year there was no mortality.

The most important of the health statistics of sickness and mortality among the troops according to the different groups and orders of diseases are shown in Abstract XXXVI.

General Diseases.—*Diseases dependent on Morbid Poisons.* — *Eruptive fevers* were the cause of eight admissions, one of which was a case of *small-pox*, most probably contracted in the city of Cairo; the case did well. The disease is prevalent in Egypt, but no other case occurred amongst the troops, and in the preceding year there was no occurrence of the disease. The remaining admissions for eruptive fevers were two for scarlet fever in Cairo, two for measles in Alexandria, and three for cow-pox.

Enteric Fever caused 40 admissions and 9 deaths, being in the ratios of 12·6 and 2·84 per 1,000 respectively. These ratios show a considerable decline as compared with the corresponding rates in previous years, the decrease in admission rate from that in 1890 being 25·7, and that from the five years' average rate as much as 34·8; the mortality rate is lower than in the previous year by 4·33, and below the quinquennial average rate by 9·89. The constantly sick rate, 2·49 per 1,000, is lower in these comparisons by 4·31 and 4·53 respectively. The per-centage of mortality to attack was 22·5, that in the previous year having been 18·7, and that of the average of the preceding five years 26·8.

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Egypt.

The relative sickness and mortality from enteric fever at Cairo and Alexandria during the year are shown in the following table:—

Stations.	Average Strength.	Admissions.	Deaths.	Constantly Sick.	Ratios per 1,000 of Strength.		
					Admissions.	Deaths.	Constantly Sick.
Cairo - - -	2,292	31	8	5·43	13·5	3·49	2·37
Alexandria - -	880	9	1	2·48	10·2	1·14	2·82

Compared with the corresponding table in the previous year it will be seen that it was in Alexandria that the notable decrease both in sickness and mortality from enteric fever took place, and that on the contrary, in Cairo, there was an increase both in admission and death rates. At Alexandria in the preceding year there was a considerable outbreak of the disease in the 2nd Battalion Suffolk Regiment, which was, the Principal Medical Officer thinks, no doubt influenced by the immature age of the regiment generally, and the fact that it had not become acclimatised to the country. This regiment was relieved early in the year by the 1st Battalion Devonshire Regiment, whose general conditions were in many respects not unlike the Suffolk Regiment, that is, many of the men in the ranks were under 20 years of age; the regiment was fresh from England, and occupied the same barracks as the Suffolk Regiment. Fearing an outbreak of enteric fever a camp was formed at Ramleh, in which two companies of the regiment at a time were accommodated. The benefit to health derived by the change was considerable, the men returned to the insanitary conditions of Alexandria full of health and vigour, and better prepared to resist the ever present pythogenic influences. The health of the regiment was at all times a matter of the greatest care, and every detail affecting it was carried out carefully and systematically.

Simple Continued Fevers caused 320 admissions and one death. The admission ratio, 100·9 per 1,000, is higher than that in the previous year by 17·4, but lower than the average ratio for the previous five years by 50·6. The ratio constantly sick from these fevers was 3·52 per 1,000, which is lower than in 1890 by ·42, and than the quinquennial average rate by 1·94. These fevers were more prevalent in proportion at Cairo than Alexandria, and more numerous than in the previous year, and 97 admissions occurred in the month of August out of a total of 257; a large proportion came from Abbassiyeh. The diminished prevalence of these fevers at Alexandria is attributed by the medical officer in charge to the fact that on the whole the summer was comparatively cool.

Dysentery.—66 admissions and 1 death are returned. The admission rate, 20·8 per 1,000, is lower than the corresponding rate in the previous year by 11·0, and than the average rate of five years by 33·2. In Alexandria the admission rate was 51·1 per 1,000, and in Cairo 9·2. The greater prevalence of this disease at the former place is thought to be accounted for by the frequent changes of climate and consequent liability to chill.

Other Diseases of the first sub-group which in the previous year caused 48 admissions, chiefly for influenza, were represented in the year under report by a single case of mumps.

Malarial Fevers gave an admission ratio of 21·8 per 1,000, much in excess of the previous year's rate, the increase being as much as 17·8; the ratio is also more than double the five years' average rate. All the admissions were due to ague, and of the cases 58 occurred at Alexandria, chiefly from the camp at Mandara. As a rule the prevailing wind is from the sea, but for several days in December it blew from the land across some salt lakes, and many cases of ague occurred.

Venereal Diseases were, as usual, the most frequent causes of sickness and inefficiency, about a third of the total number of admissions being due to

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them. The admissions for primary syphilis were 216, being in the ratio of 68·1 per 1,000, which is lower than the corresponding rate in the previous year by 14·5, but fractionally above the average rate of the preceding five years. Including simple venereal ulcer, which caused 267 admissions, and for which 20·89 men were constantly sick, the admission ratio for primary venereal sores was 152·3 per 1,000, an increase of 10·8 on the rate in the preceding year, and one of 19·7 on the quinquennial average rate. *Secondary syphilis* was the cause of 170 admissions, the ratio per 1,000 being 53·6, an increase of 11·8 on the last year's rate, and one of 26·0 on the average rate. *Gonorrhœa* caused 360 admissions, equal to a ratio of 113·5 per 1,000, which is higher than the rate in 1890 by 13·8, and than the average rate by 15·2. The total admission ratio for all forms of venereal disease amounted to 319·4 per 1,000, which is in excess of the rate in the preceding year by 36·1, and above the quinquennial average rate by 60·9. The total amount of constant inefficiency was equal to 23·59 men per 1,000, which is more than in 1890 by 2·70, and above the average by 5·27. Taking the two stations separately it is found that at Alexandria the admission rate for all forms of venereal diseases was equal to 375·0, and the rate of constant inefficiency 29·87 per 1,000, while in Cairo these ratios were 298·0 and 21·39 per 1,000 respectively. With the exception of the last, in which there is a slight decrease, all these ratios have increased to some extent as compared with the previous year's return. *Egypt.*

Parasitic Diseases caused 23 admissions, all for tænia solium, as compared with 3 in the preceding year; the increase was due to the occurrence of 20 cases in the Dorsetshire Regiment, at Cairo.

Alcoholism was the cause of 15 admissions, the same number as in the preceding year; all were mild in character.

Debility.—39 admissions are returned equal to a ratio of 12·3 per 1,000, which is higher than the last years' rate by 3·3, though below the average rate of five years by 22·0.

Rheumatism gave an admission rate of 31·8 per 1,000, higher by 2·2 than in 1890, and than the five years' average by 8·0. Among 101 admissions there were 12 of rheumatic fever, all of which did well.

Tubercular Diseases.—3 admissions and 1 death are returned, all cases of lung affection. The admission and death ratios, ·9 and ·31 per 1,000, compare favourably with those in the previous year and with average rates.

Other diseases of this group caused 30 admissions, or 9·5 per 1,000. They comprised 6 cases of anæmia, 2 of scrofula, and 22 of non-malignant new growth.

Local Diseases.—*Diseases of the Nervous System* caused 40 admissions, equal to a ratio of 12·6 per 1,000, an increase of 5·8 on the corresponding rate for the previous year, and above the average rate for five years by 3·6. Among the cases treated were 13 of neuralgia, 7 of epilepsy, 3 of paralysis, and 3 of mental disease.

Diseases of the Eye show 73 admissions, or 23·0 per 1,000, which is less than in 1890 by 8·2, and below the average rate of five years by as much as 28·7. Conjunctivitis was the chief cause of admission, all the cases but five being returned under this head.

Diseases of other Organs of Special Senses gave an admission ratio of 15·1 per 1,000, almost identical with that in the previous year and differing but slightly from the average rate. With the exception of a single case of epistaxis all the admissions were for aural diseases, principally affections of the external meatus.

Diseases of the Circulatory System.—34 admissions are recorded; the admission ratio, 10·7 per 1,000, is lower than in the previous year by 8·3 and than the average rate by 4·8. There were 2 cases of valvular disease of the heart, 1 of angina pectoris, and all the remaining admissions were due to palpitation.

Diseases of the Respiratory System were at the rate of admission of 30·3 per 1,000, an increase of 1·3 on the previous year's rate, but a decrease of 1·5 from the average rate. Out of 96 admissions, 47 were cases of bronchial affection and among the remainder were 17 of pneumonia and 16 of pleurisy. Two deaths occurred from pneumonia and one from pneumonic phthisis, and there was also one death of an invalid from pneumonia.

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Egypt.

Diseases of the Digestive System caused 401 admissions, equal to 126·4 per 1,000, which is below the corresponding rate in the previous year by 12·0, and below the quinquennial average rate by 30·6. Among the admissions were 108 cases of affections of the mouth and throat, 83 for dyspepsia, and 62 for hepatic diseases, including 2 cases, one fatal, of abscess of the liver.

Diseases of the Lymphatic and Glandular System caused 36 admissions, or 11·3 per 1,000, below the last year's rate by 9·6, and below the average by 12·1.

Diseases of the Urinary System gave 4 admissions as compared with 3 in the previous year. There was one death, that of an invalid from nephritis.

Diseases of the Generative System gave an admission rate of 104·7 per 1,000, which is in excess of the last year's rate by as much as 32·1, and above the average rate by 19·2. Simple venereal ulcer was the cause of three-fourths of the admissions, and among the remainder orchitis was the chief ailment.

Diseases of the Organs of Locomotion were the cause of 34 admissions, or 10·7 per 1,000, an increase on the rate in the previous year and on the average rate. Synovitis was the principal cause of admission.

Diseases of the Connective Tissue caused an admission rate of 26·2 per 1,000, a decrease of 13·1 on the last year's rate.

Diseases of the Skin.—The admissions, 197 in number, gave a ratio of 62·1 per 1,000, almost identical with that in the previous year and rather above the average rate. The admissions were of ordinary character.

Under the head of *Poisons* two admissions are shown, one from poisoning by absinthe, and the other from poisoning by scorpion sting.

Injuries caused 298 admissions and 5 deaths. The admission rate was 94·0 per 1,000, about the average rate and rather above the last year's rate. There was no admission for general injury, but there were three deaths from drowning, one man at Alexandria while bathing, and two men at Cairo, one in the Nile while bathing, and the other was found drowned in a deep well at Abbassiyeh. The admissions for local injury were principally for contusions, wounds, and sprains, and there were two deaths, one from fracture of the skull, accidental, and one from gunshot wound, suicidal.

Invaliding.—The number of men invalided to England during the year was 71, equal to a ratio of 22·38 per 1,000, which is higher than the corresponding rate in the previous year by 4·31, but lower than the average ratio for the preceding eight years by 52·72 per 1,000. Taking arms of the service the invaliding rate in the engineers was 30·61 per 1,000, that in the infantry 24·25, that in the staff and departments 17·92, that in the cavalry 13·79, and that in the artillery *nil*. Of particular corps the highest annual invaliding rate was 129·41 per 1,000 in the 2nd Battalion Suffolk Regiment, due to a certain number of men being sent home before the regiment left for India early in the year, thus causing a small average annual strength. Among other infantry regiments the 2nd Battalion Royal Irish Rifles gave an annual rate of 37·43 and the 1st Battalion Dorsetshire Regiment one of 26·67. With regard to the ages of the men invalided it will be observed from the table on a previous page that the highest invaliding rate was 30·18 per 1,000 among men between 20 and 25 years, the next being 24·15 among men between 30 and 35 years of age; the lowest ratio was among men under 20 years of age. Compared with corresponding rates in the previous year, there is an increase in the ratios of men invalided at the periods of age up to 30 years, but a decrease in those invalided at the periods between 30 and 40 years of age. As to the effect of service in the Command it is observed that the highest invaliding ratio was 51·72 per 1,000 among men in their fourth year of service, but this was due to the invaliding of six men out of a small average annual strength. The greatest number of men were invalided in their first and second year of service in the country, the ratios being 14·85 and 37·04 respectively. Compared with corresponding ratios in the preceding year, there is a decrease in the invaliding rate among men in their first year of service in the country, but an increase in the remaining ratios up to five years' service. The principal causes of invaliding were enteric fever, 8 cases, or 2·52 per 1,000, as compared with 2·18 in the previous year; simple continued fever 1·26 per 1,000; constitutional syphilis and debility each 1·26, rheumatic affections 1·58, diseases of the nervous system 1·58, including mental affections ·32, diseases of other

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organs of special sense 1·26, diseases of the circulatory system 2·52, diseases of the digestive system 2·84, and injuries 1·58 per 1,000.

The number of men finally discharged by invaliding was 55, equal to a ratio of 17·33 per 1,000, which is in excess of the corresponding rate in the previous year, but below the average rate of the preceding eight years by 8·94. The principal disabilities necessitating discharge were constitutional syphilis, ·95 per 1,000; debility, 1·89; diseases of the nervous system, 1·89, including 3 cases, or ·95 per 1,000 for mental disease; diseases of organs of special senses, 1·89 per 1,000; diseases of the circulatory system, 3·78; diseases of the digestive system, 1·89, and diseases of the generative system and injuries ·95 respectively.

Officers.—The average strength was 115, and there were 108 cases of illness, no death, and 11 officers were invalided. The ratio of prevalence of sickness, therefore, was 939·1 per 1,000, an increase of 163·2 on the previous year's rate, and the invaliding rate 95·6, an increase of 61·1. Among the cases treated were 2 of enteric fever, 1 of typhus fever, 45 of simple continued fever, 2 of dysentery, 10 of respiratory disease, 19 of digestive disorders, including 11 of hepatic disease, and 5 of injury. The causes of invaliding were enteric fever, 3 cases, hepatitis 2, and dysentery, tubercular disease of the lungs, anæmia, melancholia, amaurosis, and gunshot wound (accidentally received while at revolver practice) respectively.

Women.—The average strength was 145, and there were 233 cases of illness and 3 deaths. The ratio of prevalence of sickness was 1606·9 per 1,000, and that of mortality, 20·69. Compared with corresponding ratios in the preceding year the sick rate is increased by 62·1, and the death rate by 6·90. Among the cases treated may be mentioned 2 of small-pox, 1 of typhus fever, 4 of enteric fever, 21 of simple continued fever, 5 of dysentery, 33 of debility, 28 of conjunctivitis, 12 of respiratory disease, 69 of digestive disorders, including 10 of liver affections, and 11 of diseases of the generative system. The fatal cases were two of puerperal septicæmia, and one of carcinoma.

Children.—The average strength was 204, and there were 437 cases of sickness and 16 deaths, being in the ratios of 2142·2 and 78·43 per 1,000 respectively, the former being higher than the corresponding rate in the previous year by 262·6, and the latter lower by 10·58. The principal causes of sickness were conjunctivitis 130 cases, diarrhœa 48, bronchial affections 60, measles 31, teething 30, enteric fever 21, debility 18, and simple continued fever 15 cases. Among the remainder may be mentioned 5 of scarlet fever, 2 of whooping cough, 1 of diphtheria, and 7 of dysentery. The causes of death were convulsions, 4 cases, debility 3, diarrhœa 3, and whooping cough, enteric fever, bronchitis, teething, gastritis, and enteritis one case respectively.

Sanitary Conditions.—The Principal Medical Officer reports that the health of the troops during the year was very good, and the mortality amongst them less than it has been since the occupation of the country. The sanitary condition of the different barracks and their vicinity were carefully attended to, and such improvement as was found to be necessary was recommended.

At Kasr-el-Nil barracks, on the banks of the Nile, the annual rise of the river is liable to cause attacks of fever; that period was, therefore, selected for military training, and the troops were placed under canvas in the desert near Abbassiyeh. The native village close to the walls of the Citadel was demolished and levelled; this village was not only an eye sore but a constant danger to the health of the men quartered in the Citadel. The neighbourhood of Kasr-el-Nil barracks is in a better condition than it was; the ground has been levelled in many places and is gradually being built upon, the class of houses erected being good. The water supply is good; great care is taken in properly filtering it and preserving its purity when filtered. It is stated that at Alexandria there is always the danger of an impure water supply; all drinking water is supposed to be boiled, but it is doubtful whether this has been thoroughly carried out in former yeers.

Much watchfulness, it is said, has been necessary to ensure that the dry-earth system was effectually carried out. Difficulty was experienced in getting the proper quality of dry earth necessary for success, and without care and attention being bestowed sand instead of earth would be issued.

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Egypt.

The rations of the troops are reported to be generally of good quality, and the cooking is performed with a fair amount of skill.

The clothing of the troops was suitable to the climate and to the different seasons of the year.

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XV.—ON THE HEALTH OF THE TROOPS ON BOARD SHIP.

Troops on Board Ship.

The troops embarked during the year, as shown by the returns received in the Medical Division, War Office, were :—

I. Troops proceeding on service abroad - - -	19,377
II. Troops returning from abroad - - - -	17,329
Invalids returning to England - - -	1,932
III. Troops proceeding from one station abroad to another	7,016

I.—Troops proceeding on Foreign Service.

The total number of warrant officers, non-commissioned officers, and men embarked for foreign service during the year was 19,377, and the equivalent annual strength was 1,380. There were 1,647 admissions into hospital and 6 deaths, being in the annual ratios of 1,193·5 and 4·34 per 1,000 respectively. Compared with corresponding ratios in the preceding year there is a decline of 68·1 in the admission rate and one of 3·54 in the death rate, and compared with similar average ratios for the previous ten years the admission rate shows an increase of 132·5, and the death rate one of ·52 per 1,000.

The admissions and deaths according to the different groups and orders of diseases are shown in Abstract XXXVII.

General Diseases.—*Diseases dependent on Morbid Poisons.—Eruptive fevers* were represented by a single case of measles amongst the men ; it occurred on H.M.S. "Serapis," on her voyage to India, in February ; the disease, also, made its appearance amongst the children on board. *Enteric fever* was the cause of one admission, which had a fatal result. This also occurred on H.M.S. "Serapis," but on her voyage out in October ; the origin of the case was not discovered. *Simple continued fever* gave 20 admissions, equal to a ratio of 14·5 per 1,000, which is higher than the corresponding rate in the previous year by 2·7. The remaining admissions in the first sub-group of diseases were one for dysentery and one for mumps.

Not a single admission is shown under the head of *malarial fevers*, and only three, all cases of erysipelas, among *septic diseases*. The principal causes of sickness were, as in previous years, *venereal diseases*. The admissions for *primary syphilis* numbered 253, equal to an annual ratio of 183·3 per 1,000, which differs from the corresponding rate in the preceding year only by a decrease of 1·1. Adding to the admissions for primary syphilis those for simple venereal ulcer, 62 in number, a ratio of admission of 228·2 per 1,000, is obtained for primary venereal sores, which is lower than the similar rate in the preceding year by 24·7. For *secondary syphilis* the number of admissions was 63, the annual ratio being 45·7 per 1,000, which differs only fractionally from the corresponding rate in the previous year. *Gonorrhœa* caused 382 admissions, or 276·8 per 1,000, a decline of 58·1 from the similar rate in 1890. Including all forms of venereal disease, the total admission rate was 550·7 per 1,000, nearly half the admisssion rate from all causes, but less than the corresponding rate in the previous year by 83·6 per 1,000.

Parasitic Diseases are represented by a single case of tænia solium, and *alcoholism*, by two admissions, one of which was a fatal case of delirium tremens. *Debility* was the cause of 13 admissions, or 9·4 per 1,000, as compared with 8·7 in the previous year. *Rheumatism* caused 33 admissions, equal to an annual ratio of 23·9 per 1,000, which differs only fractionally from that in the previous year. Among the admissions there were two cases of rheumatic fever. There was no admission for tubercular disease, and the remaining admissions for general diseases were 29 for non-malignant new growth, chiefly papilloma.

Local Diseases.—*Diseases of the Nervous System* caused 9 admissions, or 6·5 per 1,000, as compared with 3·9 in the previous year. The cases comprised three of epilepsy, three of neuralgia, and three of mental disease.

Diseases of the eye gave 16 admissions principally cases of conjunctivitis, and *diseases of the ear* 10 admissions, all for inflammation of the external meatus. The admission ratios 11·6 and 7·2 per 1,000 respectively show an increase on the last year's rates. There was no admission for *disease of the circulatory system*, but 112 for *diseases of the respiratory system*, of which two

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Troops on Board Ship.

were fatal. The annual admission ratio 81·2 per 1,000, is lower than that in the preceding year by 15·7. The cases comprised 71 of bronchitic affection, 38 of pneumonia, and 3 of pleurisy; the deaths were due to pneumonia. *Diseases of the digestive system* caused 137 admissions, equal to an annual rate of 99·3 per 1,000, which is below the last year's rate by 18·1. The principal causes of sickness were throat affections 78 cases; the next being dyspepsia and diarrhœa. *Diseases of the lymphatic and glandular system* gave an admission rate of 19·6 per 1,000, a decline of 6·4 from the previous year's rate. *Diseases of the generative system* were at the annual rate of 89·9 per 1,000, a decline of 22·0 from the last year's rate. Of 124 cases, all but ten were either simple venereal ulcer or balanitis. *Diseases of the organs of locomotion* were at the rate of 5·1, and *diseases of the connective tissue* at the rate of 37·0 per 1,000, which are in excess of the corresponding rates in the previous year; and cutaneous diseases gave a ratio of 123·2 per 1,000, a decrease of 17·1 from the rate in 1890. Itch was the principal cause of admission. The admission ratio for injuries was 131·2 per 1,000; there were 3 cases of general injury, two of burns and one of heat apoplexy; of 178 cases of local injury, contusion, wounds and burns were the principal causes of admission. There were two deaths, one from fracture of the base of the skull and the other from rupture of abdominal viscera, the result of injuries received on H.M.S. "Crocodile" in December, during a storm in the Bay of Biscay.

The number of officers embarked was 956, among them 21 cases of sickness occurred, and there was one death, a case of suicide by gunshot while in a state of temporary insanity. The number of women embarked was 800, no death occurred among them; but among 1,004 children embarked there were 7 deaths, two from bronchitis, two from congenital syphilis, and one from pneumonia, convulsions, and diarrhœa respectively.

II.—Troops returning Home from Abroad.

The number of effective warrant officers, non-commissioned officers, and men who embarked for England was 17,329, the equivalent annual strength being 1,272. The number of admissions into hospital was 1,372, and there were 15 deaths. The annual admission rate, therefore, was 1,078·6, and the annual death rate 11·79 per 1,000, which are below the corresponding ratios in the preceding year by 319·8 and by 1·68, but above the similar average ratios for the previous ten years by 89·7 and ·89 respectively.

The admissions and deaths in the different groups and orders of diseases are shown in Abstract XXXVII.

General Diseases.—*Diseases dependent on Morbid Poisons.*—There was no admission for *eruptive fever*, but one for *enteric fever*; this occurred on the S.S. "Lismore Castle," *en route* from South Africa, where the man probably contracted the disease; the case proved fatal. *Simple continued fever* caused 33 admissions, being in the ratio of 25·9 per 1,000, a decline of 6·7 from the rate in the preceding year. There were 16 admissions for dysentery, equal to 12·6 per 1,000, as compared with 15·7 in the previous year. Of the cases 2 were fatal. *Influenza* caused 63 admissions or 49·5 per 1,000. Of the cases 56 occurred on H.M.S. "Himalaya" on the voyage home from Hong Kong, starting in February; there were also 6 cases on H.M.S. "Crocodile" on her voyage home from India in November, and one on H.M.S. "Euphrates" in December.

Malarial Fevers.—The admissions were 108 in number, being in the annual ratio of 84·9 per 1,000, which, however, shows a decline of 130·6 as compared with the corresponding ratio in the previous year. With the exception of two cases of remittent fever all the admissions were returned under the head of ague.

Septic diseases were represented by a single case of erysipelas.

Venereal Diseases.—Primary syphilis caused 265 admissions, being in the annual ratio of 208·3 per 1,000, a decline of 68·9 from the previous year's rate. Including the sickness from simple venereal ulcer, 69 admissions, the ratio of admission for primary venereal sores was 262·5 per 1,000, which shows a decline of 57·3 from the ratio in the preceding year. *Secondary syphilis* caused 75 admissions, equal to 59·0 per 1,000, which is greater than the rate in the previous year by 11·8. The admissions for *gonorrhœa* were 310 in number, or 243·7 per 1,000, an increase of 32·7 on the rate in 1890. Including all forms of venereal disease the total admission rate was 565·2 per 1,000, as compared with 578·0 in the preceding year.

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Troops on Board Ship.

Alcoholism caused only a single admission, a case of delirium tremens, which proved fatal. There were 10 admissions for *debility*, against 13 in 1890. The admissions for *rheumatism* were 22 in number, equal to a ratio of 17·3 per 1,000, a decline of 14·1 from the last year's rate. There was no case returned as rheumatic fever. Two admissions are shown under the head of tubercular disease of the lungs and 3 deaths, and the remaining admissions in this group comprised 3 of anæmia, and 1 each of purpura, scrofula, and papilloma.

Local Diseases.—*Diseases of the Nervous System.*—4 admissions only are returned, one for paralysis and the other three for mental disease. *Ophthalmic affections* also only caused 4 admissions, three being cases of conjunctivitis. *Aural diseases* and *diseases of the circulatory system* each gave one admission only, but there was one death from valvular disease of the heart. *Diseases of the respiratory system* caused 103 admissions, equal to a ratio of 81·0 per 1,000, which is less than half the corresponding rate in the previous year. The cases comprised 79 of bronchitic affections, 20 of pneumonia, and 4 of pleurisy. There were 6 deaths, all from pneumonia. The admissions for *diseases of the digestive system* numbered 72, being in the annual ratio of 56·6 per 1,000, a decline of 10·7 from the last year's rate. The principal causes of admission were affections of the mouth and throat 27 cases, diarrhœa 19, and hepatic disease 13 cases. One death occurred from peritonitis. *Diseases of the lymphatic and glandular system* caused an admission rate of 35·4 per 1,000, a decline of 14·0 from the rate in the previous year. There was only one admission for *urinary affection*, a case of Bright's disease. *Diseases of the generative system* gave an admission rate of 76·2 per 1,000, an increase of 29·1 on the rate in 1890. Simple venereal ulcer was the chief cause of sickness, followed by orchitis and balanitis. There were 6 admissions for *diseases of the organs of locomotion* as compared with five in the previous year. *Diseases of the connective tissue*, with an admission ratio of 21·2 per 1,000, were rather more frequent than in the previous year, but *diseases of the skin* were much less so, the rate having fallen from 67·3 to 38·5 per 1,000. The admissions for injuries were at the rate of 36·2 per 1,000, less than half the previous year's rate. There was no admission for general injury and the cases of local injury were of ordinary character.

Of 752 officers embarked 54 were shown on the sick list, and there was one death from peritonitis. No death occurred among 818 women embarked, but among 1,758 children embarked there were 6 deaths, comprising two from bronchitis, two from diarrhœa, one from debility, and one from sunstroke.

Invalids returning to England.—The number embarked from foreign stations was 1,932, the equivalent annual strength being 137·3. There were 13 deaths on the passage home.

The sickness and mortality among these invalids are fully accounted for in the statistical tables of the Command from which they were invalided.

III.—Troops proceeding from one Station abroad to another.

The number of warrant officers, non-commissioned officers, and men who embarked to proceed from one station abroad to another was 7,016, the equivalent annual strength being 286. The number of admissions into hospital was 400 and there were 2 deaths, being in the annual ratios of 1398·6 and 6·99 per 1,000 respectively, the former being lower than the corresponding rate in the previous year by 238·1 and the latter by ·83, but compared with the average ratios for the preceding ten years there is an increase of 403·1 in the admission rate and one of 1·47 in the death rate.

The admissions in the different groups and orders of diseases are shown in Abstract XXXVII.

General Diseases.—*Diseases dependent on Morbid Poisons.*—Under the head of *eruptive fevers* 3 cases of small-pox are returned, they occurred on H.M.S. "Orontes" among troops proceeding from Alexandria to Hong Kong; it is believed the first case was probably contracted at Cairo; one was landed at Colombo, and the others were transferred to civil hospital ship at Hong Kong; all eventually did well. There was no admission for *enteric fever*, but *simple continued fever* caused 11 admissions, equal to a ratio of 38·4 per 1,000, which is lower than that in the previous year by 28·0. *Dysentery* was the cause of 4 admissions, equal to a rate of 14·0 per 1,000, as compared with 50·8 in the preceding year.

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Troops on Board Ship.

Malarial fevers caused only 3 admissions, or 10·5 per 1,000, as compared with 43·0 in 1890. All the admissions were due to ague.

Venereal Diseases.—The admissions for *primary syphilis* were 89 in number, the annual ratio being 311·2 per 1,000, a decrease of 40·3 from the corresponding rate in the previous year. Including simple venereal ulcer, which caused 13 admissions, the annual admission rate for primary venereal sores was 356·7 per 1,000, a decline of 49·5. *Secondary syphilis* gave 14 admissions, or 48·9 per 1,000, as compared with 50·8 in 1890. *Gonorrhœa* was the cause of 82 admissions, or 286·7 per 1,000, a decline of 88·3 from the last year's rate. Including all forms of venereal disease the annual admission rate was equal to 692·3 per 1,000, a decline of 139·7 from the rate in 1890.

Debility caused 7 admissions, or 24·5 per 1,000, an increase on the previous year's rate. *Rheumatism* was the cause of 10 admissions, or 35·0 per 1,000, almost identical with the ratio of the preceding year. The cases included one of rheumatic fever. *Tubercular disease* gave one admission, which ended fatally, non-malignant new growth two admissions, and scrofula and cancer one admission respectively.

Local Diseases.—*Diseases of the Nervous System* were represesented by an admission for neuralgia and a fatal case of epilepsy. *Ophthalmic* affections caused 8 admissions, and *aural disease* one admission. There was no admission for *diseases of the circulatory system*, but there were 30 for respiratory diseases, the admission ratio, 104·9 per 1,000, is more than double that in the previous year. The admissions, with one exception, a case of pneumonia, were all for bronchitic affections. *Diseases of the digestive system* were the cause of 24 admissions, or 83·9 per 1,000, as compared with 117·2 in the previous year. *Diseases of the Lymphatic and Glandular System* gave an admission rate of 17·5 per 1,000, a considerable decline from the last year's rate. *Diseases of the generative system* were at the rate of 73·4 per 1,000, a decrease of 36·0. There were 2 admissions for *diseases of the organs of locomotion*, 16, or 55·9 per 1,000, for diseases of the connective tissue, and 27, or 94·4 per 1,000, for skin diseases; the last two ratios show an increase as compared with the previous year's return. Injuries caused 27 admissions, equal to an annual ratio of 94·4 per 1,000, differing only fractionally from the corresponding rate in the preceding year. The cases were of ordinary character.

Among 225 officers embarked no case of sickness was returned. The number of women embarked was 245, no death occurred among them, but among 358 children embarked there was one death from debility.

IV.—Sanitary Condition of Ships.

The sanitary condition of the different vessels and troopships, and the accommodation provided for the troops on board, were generally reported to have been satisfactory.

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ABSTRACTS I. to XLIII.

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ABSTRACT No. I.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS serving in the UNITED KINGDOM during the Year 1891,

Diseases.	Admissions into Hospital.	Died. With the Regiment.	Died. Absent from the Regiment.	Died. Total.	Invalids Discharged the Service.
Average Strength in Annual Returns, 99,308. † Average Strength, including Men detached, 100,984.					
I.—GENERAL DISEASES.					
GROUP "A."					
Sub-Group I. Small-pox	1	—	—	—	—
Other Eruptive Fevers	733	2	1	3	—
Enteric Fever	109	16	1	17	—
Other Continued Fevers	465	2	—	2	—
Yellow Fever	—	—	—	—	—
Cholera	—	—	—	—	—
Dysentery	66	3	1	4	5
Other Diseases	1,992	4	—	4	—
Total	3,366	27	3	30	5
Sub-Group II.—Malarial Fevers	761	3	—	3	1
Sub-Group III.—Septic Diseases	144	5	1	6	—
Sub-Group IV. Syphilis, Primary	6,263	—	—	—	—
„ Secondary	3,493	4	—	4	73
Gonorrhœa	8,455	—	—	—	4
Total	18,211	4	—	4	77
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—
GROUP "B."					
Sub-Group I.—Parasitic Diseases	26	—	—	—	—
Sub-Group II. Scurvy	11	1	—	1	1
Alcoholism	238	2	—	2	—
GROUP "C."					
Debility, &c.	744	1	1	2	69
GROUP "D."					
Rheumatism	3,702	4	1	5	70
Tubercular Diseases	323	68	9	77	183
Other Diseases	337	12	—	12	37
II.—LOCAL DISEASES.					
Diseases of the—					
1. Nervous System Nervous Diseases	693	23	2	25	105
Mental „	124	1	—	1	90
2. Eye	1,051	—	—	—	51
3 & 4. Other Organs of Special Senses	326	2	—	2	73
5. Circulatory System	965	35	1	36	322
6. Respiratory „	7,855	144	11	155	76
7. Digestive „	11,323	30	5	35	91
8. Lymphatic and Glandular System	1,383	2	—	2	9
9. Urinary System	216	15	3	18	25
10. Generative „	2,665	—	—	—	18
11. Organs of Locomotion	746	3	—	3	81
12. Connective Tissue	2,427	4	—	4	8
13. Skin	7,598	—	—	—	14
III.—POISONS	16	5	—	5	1
IV.—INJURIES.					
1. General	10	35	2	37	—
2. Local	10,429	32	2	34	59
3. In Action	—	—	—	—	—
No appreciable disease	314	—	—	—	—
Cause unknown (refers to deaths only)	—	—	—	—	—
General Total	76,693	453	41	499	1,466

* The average ratios for 10 years will be given in future years. The average ratios for years 1886 to 1892 in

† Ratios of deaths and invalids calculated on this strength.

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK with the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.

Average Number constantly Sick.	Ratio per 1,000.				*Average Ratio per 1,000 from 1886 to 1890.			
	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
·12	—	—	—	—	·1	—	—	·01
49·75	7·4	·03	—	·50	6·6	·04	—	·40
19·81	1·1	·17	—	·20	1·4	·32	—	·21
16·90	4·7	·02	—	·17	5·7	·02	—	·22
—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—
8·19	·6	·04	·05	·08	·8	·04	·05	·08
53·15	20·1	·04	—	·54	14·7	·03	—	·34
147·92	33·9	·30	·05	1·49	29·3	·45	·05	1·26
26·35	7·7	·03	·01	·26	5·7	·01	·01	·20
9·71	1·4	·06	—	·10	2·4	·08	·01	·15
548·92	63·1	—	—	5·53	71·7	—	·01	6·57
326·54	35·2	·04	·72	3·29	37·9	·05	·78	3·39
551·38	85·1	—	·04	5·55	98·0	—	·04	6·32
1426·84	183·4	·04	·76	14·37	207·6	·05	·83	16·28
—	—	—	—	—	—	—	—	—
·66	·3	—	—	·01	·6	·01	—	·02
·46	·1	·01	—	—	·1	—	—	·01
9·97	2·4	·02	·01	·10	3·1	·04	—	·09
53·07	7·5	·02	·68	·53	7·5	·01	1·09	·52
224·98	37·3	·05	·69	2·27	37·8	·04	·74	2·33
53·78	3·2	·76	1·81	·54	3·7	1·05	1·75	·60
41·20	5·3	·12	·37	·41	5·2	·11	·39	·40
45·92	7·0	·25	1·04	·46	7·7	·38	1·20	·52
19·48	1·2	·01	·89	·20	1·5	·01	·95	·27
60·36	10·6	—	·51	·61	12·5	—	·71	·75
46·14	8·3	·02	·72	·46	7·1	·01	·63	·41
88·68	9·7	·36	3·19	·89	9·7	·43	3·20	·89
370·24	79·1	1·53	·75	3·73	65·6	1·40	1·06	3·34
322·37	114·0	·34	·90	3·25	100·5	·37	·97	3·02
137·42	13·9	·02	·09	1·38	18·8	·01	·08	1·94
19·78	2·2	·18	·25	·20	2·3	·17	·21	·18
157·54	26·8	—	·18	1·59	43·7	·02	·29	2·71
57·33	7·5	·03	·80	·58	7·0	·04	·88	·58
106·66	24·4	·04	·08	1·07	22·7	·01	·10	1·05
268·88	76·5	—	·14	2·71	78·7	—	·21	2·86
·78	·2	·05	·01	·01	·1	·04	—	—
·72	·1	·36	—	·01	·2	·39	·01	·01
430·70	105·0	·34	·58	4·34	97·5	·34	·81	3·97
—	—	—	—	—	—	—	—	—
9·20	3·2	—	—	·09	2·8	—	—	·08
—	—	—	—	—	—	—	—	—
4137·19	772·2	4·94	14·51	41·66	781·3	5·47	16·16	44·44

the six years 1886 to 1891 will be given in the Report for 1892; those for the seven that for 1893, &c., &c.

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ABSTRACT A.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in ENGLAND during the Year 1891, with

Average Strength, in Annual Returns, 70,488. † Average Strength, including Men detached, 71,172. — Diseases.	Admissions into Hospital.	Died. With the Regiment.	Died. Absent from Regiment.	Died. Total.	Invalids Discharged the Service.	Average Number constantly Sick.
I.—GENERAL DISEASES.						
GROUP "A."						
Sub-Group I. Small-pox	—	—	—	—	—	—
Other Eruptive Fevers	619	1	—	1	—	43·39
Enteric Fever	49	6	1	7	—	8·44
Other Continued Fevers	306	2	—	2	—	10·92
Yellow Fever	—	—	—	—	—	—
Cholera	—	—	—	—	—	—
Dysentery	57	3	1	4	4	7·65
Other Diseases	1,693	4	—	4	—	44·94
Total	2,724	16	2	18	4	115·34
Sub-Group II.—Malarial Fevers	678	2	—	2	1	24·41
Sub-Group III.—Septic Diseases	110	4	1	5	—	6·81
Sub-Group IV. Syphilis, Primary	5,031	—	—	—	—	443·62
" Secondary	2,722	2	—	2	53	253·70
Gonorrhœa	6,289	—	—	—	3	406·26
Total	14,042	2	—	2	56	1,102·58
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—
GROUP "B."						
Sub-Group I.—Parasitic Diseases	21	—	—	—	—	·59
Sub-Group II. Scurvy	6	—	—	—	—	·18
Alcoholism	185	2	—	2	—	8·26
GROUP "C."						
Debility, &c.	507	1	1	2	44	36·59
GROUP "D."						
Rheumatism	2,748	3	1	4	55	169·68
Tubercular Diseases	233	48	6	54	142	40·24
Other Diseases	406	9	—	9	29	32·17
II.—LOCAL DISEASES.						
Diseases of the— 1. Nervous System Nervous Diseases	521	17	2	19	84	36·03
Mental "	79	1	—	1	59	12·85
2. Eye	745	—	—	—	39	43·26
3 & 4. Other Organs of Special Senses	616	2	—	2	52	34·75
5. Circulatory System	706	27	1	28	260	68·16
6. Respiratory "	5,718	103	6	109	52	272·78
7. Digestive "	8,301	20	4	24	67	238·27
8. Lymphatic and Glandular System	1,020	1	—	1	7	102·91
9. Urinary System	169	12	2	14	18	14·46
10. Generative "	1,824	—	—	—	15	109·28
11. Organs of Locomotion	476	1	—	1	61	30·04
12. Connective Tissue	1,648	3	—	3	7	73·39
13. Skin	5,405	—	—	—	11	188·33
III.—POISONS	12	5	—	5	—	·72
IV.—INJURIES.						
1. General	7	27	2	29	—	·51
2. Local	7,315	25	2	27	45	305·54
3. In Action	—	—	—	—	—	—
No appreciable disease	239	—	—	—	—	7·64
Cause unknown (refers to deaths only)	—	—	—	—	—	—
General Total	56,463	331	30	361	1,108	3,085·27

* The average ratios for 10 years will be given in future years. The average ratios for 1886 to 1892 in

† Ratios of deaths and invalids calculated on this strength.

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.

Ratio per 1,000.				* Average Ratio per 1,000 from 1886 to 1890.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	·1	·01	—	·01
8·8	·01	—	·62	7·9	·05	—	·49
·7	·10	—	·12	·9	·22	—	·15
4·3	·03	—	·15	4·4	·03	—	·18
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
·8	·06	·06	·11	1·0	·04	·04	·10
24·0	·06	—	·64	15·1	·03	—	·36
38·6	·25	·06	1·64	29·4	·38	·04	1·29
9·6	·03	·01	·35	7·0	·01	·01	·25
1·5	·07	—	·10	2·5	·09	·01	·16
71·4	—	—	6·29	76·4	—	·02	7·05
38·6	·03	·74	3·59	40·1	·05	·80	3·66
89·2	—	·04	5·76	99·7	—	·04	6·53
199·2	·03	·79	15·64	216·2	·05	·86	17·24
—	—	—	—	—	—	—	—
·3	—	—	·01	·6	·02	—	·02
·1	—	—	—	·1	—	—	·01
2·6	·03	—	·12	3·1	·04	·01	·09
7·2	·03	·62	·52	7·7	·01	1·08	·53
39·0	·06	·77	2·41	40·2	·05	·77	2·48
3·3	·73	1·99	·57	3·9	1·10	1·85	·63
5·7	·13	·41	·46	5·3	·12	·44	·42
7·4	·27	1·18	·51	8·1	·39	1·24	·55
1·1	·01	·83	·18	1·3	·01	·89	·26
10·6	—	·55	·61	12·6	—	·75	·76
8·7	·03	·73	·49	7·4	·01	·62	·43
10·1	·39	3·65	·97	10·3	·43	3·43	·95
81·1	1·53	·73	3·87	69·4	1·48	1·10	3·51
117·8	·34	·94	3·38	105·5	·41	1·02	3·22
14·5	·01	·10	1·46	19·6	·01	·09	2·06
2·4	·20	·25	·20	2·2	·17	·22	·18
25·9	—	·21	1·55	44·8	·01	·33	2·89
6·7	·01	·86	·55	6·8	·05	·90	·59
23·4	·04	·10	1·05	22·8	·02	·10	1·08
76·7	—	·15	2·67	80·1	—	·20	2·89
·2	·07	—	·01	·1	·04	—	·01
·1	·41	—	·01	·2	·35	—	·01
103·8	·38	·63	4·33	96·6	·34	·86	4·03
—	—	—	—	—	—	—	—
3·4	—	—	·11	3·1	—	—	·08
—	—	—	—	—	·01	—	—
801·0	5·07	15·56	43·77	806·9	5·61	16·82	46·62

the six years 1886 to 1891 will be given in the Report for 1892; those for the seven years that for 1893, &c., &c.

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ABSTRACT B.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in SCOTLAND during the Year 1891, with

Diseases. (Average Strength, in Annual Returns, 3,854. † Average Strength, including Men detached, 3,967.)	Admissions into Hospital.	Died. With the Regiment.	Died. Absent from Regiment.	Died. Total.	Invalids Discharged the Service.	Average Number constantly Sick.
I.—GENERAL DISEASES.						
GROUP "A."						
Sub-Group I. Small-pox	1	—	—	—	—	·12
Other Eruptive Fevers	7	—	—	—	—	·59
Enteric Fever	5	—	—	—	—	·82
Other Continued Fevers	20	—	—	—	—	·53
Yellow Fever	—	—	—	—	—	—
Cholera	—	—	—	—	—	—
Dysentery	—	—	—	—	—	—
Other Diseases	73	—	—	—	—	1·82
Total	106	—	—	—	—	3·88
Sub-Group II.—Malarial Fevers	7	—	—	—	—	·13
Sub-Group III.—Septic Diseases	7	—	—	—	—	·35
Sub-Group IV. Syphilis, Primary	96	—	—	—	—	7·19
" Secondary	118	—	—	—	—	9·06
Gonorrhœa	238	—	—	—	1	12·51
Total	452	—	—	—	1	28·78
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—
GROUP "B."						
Sub-Group I.—Parasitic Diseases	1	—	—	—	—	·01
Sub-Group II. Scurvy	—	—	—	—	1	·06
Alcoholism	7	—	—	—	—	·29
GROUP "C."						
Debility, &c.	30	—	—	—	4	1·62
GROUP "D."						
Rheumatism	101	—	—	—	2	4·94
Tubercular Diseases	9	2	1	3	2	1·49
Other Diseases	14	—	—	—	—	·62
II.—LOCAL DISEASES.						
Diseases of the—						
1. Nervous System (Nervous Diseases)	19	—	—	—	1	·82
1. Nervous System (Mental ")	8	—	—	—	3	·72
2. Eye	32	—	—	—	2	1·54
3 & 4. Other Organs of Special Senses	23	—	—	—	4	1·11
5. Circulatory System	29	1	—	1	11	1·87
6. Respiratory "	238	8	—	8	4	7·68
7. Digestive "	358	2	—	2	2	7·77
8. Lymphatic and Glandular System	38	1	—	1	—	2·58
9. Urinary System	8	—	—	—	1	·37
10. Generative "	128	—	—	—	—	5·90
11. Organs of Locomotion	27	—	—	—	1	1·11
12. Connective Tissue	140	1	—	1	—	4·53
13. Skin	314	—	—	—	—	9·85
III.—POISONS	1	—	—	—	1	·03
IV.—INJURIES.						
1. General	—	—	—	—	—	—
2. Local	446	1	—	1	2	14·40
3. In Action	—	—	—	—	—	—
No appreciable disease	11	—	—	—	—	·12
Cause unknown (refers to deaths only)	—	—	—	—	—	—
General Total	2,554	16	1	17	42	102·57

* The average ratios for 10 years will be given in future years. The average ratios years 1886 to 1892 in

† Ratios of deaths and invalids calculated on this strength.

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK, the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.

Ratio per 1,000.				*Average Ratio per 1,000 from 1886 to 1890.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
·3	—	—	·03	—	—	—	—
1·8	—	—	·15	5·7	—	—	·30
1·3	—	—	·21	·8	·31	—	·12
5·2	—	—	·14	7·9	—	—	·18
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	·2	—	·06	·01
18·9	—	—	·47	9·2	·06	—	·20
27·5	—	—	1·01	23·8	·27	·06	·81
1·8	—	—	·03	2·2	—	—	·05
1·8	—	—	·10	3·6	·11	—	·17
24·9	—	—	1·86	34·4	—	—	2·79
30·6	—	—	2·36	34·5	·06	1·09	2·49
61·8	—	·25	3·25	74·5	—	·11	3·56
117·3	—	·25	7·47	143·4	·06	1·20	8·84
—	—	—	—	—	—	—	—
·3	—	—	—	·9	—	—	·02
—	—	·25	·01	·2	—	—	·01
1·8	—	—	·07	4·4	—	—	·09
7·8	—	1·01	·43	4·4	—	1·14	·34
26·2	—	·50	1·28	29·2	—	1·53	1·68
2·3	·76	·50	·39	3·2	·81	1·36	·46
3·6	—	—	·16	3·8	·16	·27	·17
4·9	—	·25	·21	6·3	·27	1·03	·40
2·1	—	·76	·19	2·2	—	·92	·31
8·3	—	·50	·40	10·8	—	1·03	·57
6·0	—	1·01	·29	6·1	—	·92	·29
7·5	·25	2·77	·48	10·8	·54	4·62	·91
61·7	2·02	1·01	1·99	61·4	1·85	2·23	3·10
92·9	·50	·50	2·02	93·5	·33	1·74	2·38
9·9	·25	—	·67	10·1	—	·06	·70
2·1	—	·25	·10	2·6	·27	·21	·20
33·2	—	—	1·53	42·6	·06	·21	2·29
7·0	—	·25	·29	8·5	—	·86	·52
36·3	·25	—	1·17	25·0	—	·21	·87
81·5	—	—	2·55	81·8	—	·21	2·68
·3	—	·25	·01	·2	·16	—	—
—	—	—	—	·5	·54	·11	·05
115·7	·25	·50	3·74	102·4	·54	1·09	3·54
—	—	—	—	—	—	—	—
2·9	—	—	·03	3·0	—	—	·06
—	—	—	—	—	—	—	—
662·7	4·28	10·59	26·61	686·9	5·97	21·00	31·51

for the six years 1886 to 1891 will be given in the Report for 1892; those for the seven that for 1893, &c., &c.

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ABSTRACT C.—Table showing the Average Strength, Admissions among the Troops stationed in Ireland during the Year 1891, with

Average Strength in Annual Returns, 24,966. † Average Strength, including Men detached, 25,845. Diseases.	Admissions into Hospital.	Died. With the Regiment.	Died. Absent from Regiment.	Died. Total.	Invalids Discharged the Service.	Average Number constantly Sick.
I.—GENERAL DISEASES.						
Group "A."						
Sub-Group I. Small-pox	—	—	—	—	—	—
Other Eruptive Fevers	106	1	1	2	—	5·77
Enteric Fever	55	10	—	10	—	10·55
Other Continued Fevers	139	—	—	—	—	5·45
Yellow Fever	—	—	—	—	—	—
Cholera	—	—	—	—	—	—
Dysentery	9	—	—	—	1	·54
Other Diseases	227	—	—	—	—	6·39
Total	536	11	1	12	1	28·70
Sub-Group II.—Malarial Fevers	76	1	—	1	—	1·81
Sub-Group III.—Septic Diseases	27	1	—	1	—	2·55
Sub-Group IV. Syphilis, Primary	1,136	—	—	—	—	98·11
„ Secondary	653	2	—	2	20	64·76
Gonorrhœa	1,928	—	—	—	—	132·61
Total	3,717	2	—	2	20	295·48
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—
Group "B."						
Sub-Group I.—Parasitic Diseases	4	—	—	—	—	·06
Sub-Group II. Scurvy	5	1	—	1	—	·22
Alcoholism	46	—	—	—	—	1·42
Group "C."						
Debility, &c.	207	—	—	—	21	14·86
Group "D."						
Rheumatism	853	1	—	1	13	50·36
Tubercular Diseases	81	18	2	20	39	12·05
Other Diseases	107	3	—	3	8	8·41
II.—LOCAL DISEASES.						
Diseases of the—						
1. Nervous System Nervous Diseases	152	6	—	6	20	9·07
1. Nervous System Mental „	37	—	—	—	28	5·91
2. Eye	274	—	—	—	10	15·56
3 & 4. Other Organs of Special Senses	187	—	—	—	17	10·28
5. Circulatory System	228	7	—	7	51	18·65
6. Respiratory „	1,899	33	5	38	20	89·78
7. Digestive „	2,664	8	1	9	22	76·33
8. Lymphatic and Glandular System	325	—	—	—	2	31·93
9. Urinary System	39	3	1	4	6	4·95
10. Generative „	713	—	—	—	3	42·36
11. Organs of Locomotion	243	2	—	2	19	17·23
12. Connective Tissue	639	—	—	—	1	28·24
13. Skin	1,879	—	—	—	3	70·70
III.—POISONS	3	—	—	—	—	·03
IV.—INJURIES.						
1. General	3	8	—	8	—	·21
2. Local	2,668	6	—	6	12	110·76
3. In Action	—	—	—	—	—	—
No appreciable disease	64	—	—	—	—	1·44
Cause unknown (refers to deaths only)	—	—	—	—	—	—
General Total	17,676	111	10	121	316	949·35

* The average ratios for 10 years will be given in future years. The average ratios for 1886 to 1892 in

† Ratios of death and invalids calculated on this strength.

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.

Ratio per 1,000.				*Average Ratio per 1,000 from 1886 to 1890.			
Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.	Admissions.	Deaths.	Invalids Discharged the Service.	Constantly Sick.
—	—	—	—	—	—	—	—
4·2	·08	—	·23	3·0	·02	—	·18
2·2	·38	—	·42	2·7	·61	—	·49
5·6	—	—	·22	9·2	·01	—	·31
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
·4	—	·04	·02	·3	·03	·04	·03
9·1	—	—	·26	14·4	·03	—	·31
21·5	·46	·04	1·15	29·6	·70	·04	1·23
3·0	·04	—	·07	2·5	·01	·01	·08
1·1	·04	—	·10	1·9	·04	·01	·10
45·5	—	—	3·93	64·0	—	—	5·75
26·2	·08	·77	2·59	32·4	06	·66	2·77
77·2	—	—	5·31	96·4	—	·03	6·14
148·9	·08	·77	11·83	192·8	·06	·69	14·66
—	—	—	—	—	—	—	—
·2	—	—	—	·5	—	—	·01
·2	·04	—	·01	·2	—	—	·01
1·8	—	—	·06	2·6	·02	—	·07
8·3	—	·31	·59	7·4	·02	1·06	·51
34·2	·04	·50	2·02	32·5	·02	·57	1·99
3·2	·77	1·51	·48	3·3	·92	1·53	·54
4·3	·12	·31	·34	5·4	·09	·29	·39
6·1	·23	·77	·36	7·0	·34	1·12	·47
1·5	—	1·08	·24	1·8	·02	1·13	·31
11·0	—	·39	·62	12·8	—	·56	·75
7·5	—	·66	·41	6·4	·01	·60	·36
9·1	·27	1·97	·75	8·1	·38	2·36	·72
76·1	1·47	·77	3·60	55·3	1·10	·79	2·89
106·7	·35	·85	3·06	87·4	·26	·72	2·57
13·0	—	·08	1·28	17·8	—	·07	1·80
1·5	·15	·23	·20	2·0	·15	·22	·16
28·6	—	·12	1·70	40·7	·02	·19	2·27
9·7	·08	·74	·69	7·1	·03	·74	·57
25·6	—	·04	1·15	22·2	—	·66	1·00
75·3	—	·12	2·83	74·3	—	·22	2·30
·1	—	—	—	·1	·03	·01	—
·1	·31	—	·01	·1	·46	·01	·01
106·9	·23	·46	4·44	99·1	·33	·63	3·87
—	—	—	—	—	—	·01	—
2·5	—	—	·06	2·0	—	—	·06
—	—	—	—	—	—	—	—
708·0	4·68	12·22	38·03	722·9	5·01	13·67	40·20

the six years, 1886 to 1891, will be given in the Report for 1892; those for the seven years that for 1893, &c., &c.

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ABSTRACT D.—TABLE showing the AVERAGE STRENGTH, SICKNESS, UNITED KINGDOM in 1891, with

Average Strength.	Officers, 3,972.			
Diseases.	Attacks of Illness.	Deaths.	Ratios per 1,000. Attacks.	Ratios per 1,000. Deaths.
I.—GENERAL DISEASES.				
GROUP "A."				
Sub-Group I. Small-pox	—	—	—	—
Other Eruptive Fevers	14	—	3·5	—
Enteric Fever	14	1	3·5	·25
Other Continued Fevers	35	—	8·8	—
Yellow Fever	—	—	—	—
Cholera	—	—	—	—
Dysentery	8	—	2·0	—
Other Diseases	227	1	57·2	·25
Total	298	2	75·0	·50
Sub-Group II.—Malarial Fevers	56	—	14·1	—
Sub-Group III.—Septic Diseases	2	—	·5	—
Sub-Group IV. Syphilis, Primary	—	—	—	—
„ Secondary	6	—	1·5	—
Gonorrhœa	29	—	7·3	—
Total	35	—	8·8	—
Sub-Group V.—Hydrophobia, &c.	—	—	—	—
GROUP "B."				
Sub-Group I.—Parasitic Diseases	—	—	—	—
Sub-Group II. Scurvy	—	—	—	—
Alcoholism	2	—	·5	—
GROUP "C."				
Debility, &c.	32	—	8·1	—
GROUP "D."				
Rheumatism	70	—	17·6	—
Tubercular Diseases	3	1	·7	·25
Other Diseases	6	—	1·5	—
II.—LOCAL DISEASES.				
Diseases of the—				
1. Nervous System (Nervous Diseases)	4	1	11·1	·25
1. Nervous System (Mental „)	—	—	—	—
2. Eye	14	—	3·5	—
3 & 4. Other Organs of Special Senses	8	—	2·0	—
5. Circulatory System	1	—	·3	—
6. Respiratory „	263	5	66·2	1·26
7. Digestive „	242	3	60·9	·76
8. Lymphatic and Glandular System	21	—	5·3	—
9. Urinary System	14	—	3·5	—
10. Generative „	41	—	10·3	—
11. Organs of Locomotion	26	—	6·5	—
12. Connective Tissue	36	—	9·1	—
13. Skin	45	—	11·3	—
III.—POISONS	—	—	—	—
IV.—INJURIES.				
1. General	1	1	·3	·25
2. Local	270	6	68·0	1·51
3. In Action	—	—	—	—
No appreciable disease	1	—	·3	—
Cause unknown (refers to deaths only)	—	—	—	—
General Total	1,531	19	385·4	4·78

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and MORTALITY among the OFFICERS, WOMEN, and CHILDREN in the the Ratios per 1,000 of the Strength.

Women, 10,229.				Children, 20,727.			
Attacks of Illness.	Deaths.	Ratios per 1 000.		Attacks of Illness.	Deaths.	Ratios per 1,000.	
		Attacks.	Deaths.			Attacks.	Deaths.
—	—	—	—	—	—	—	—
28	—	2·7	—	1,774	33	85·6	1·59
7	—	·7	—	17	—	·8	—
30	—	2·9	—	157	1	7·6	·05
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
12	1	1·2	·10	17	—	·8	—
380	—	37·2	—	1,158	26	55·9	1·25
457	1	44·7	·10	3,123	60	150·7	2·89
43	—	4·2	—	46	—	2·2	—
30	5	2·9	·49	13	4	·6	·19
—	—	—	—	—	—	—	—
26	—	2·5	—	23	6	1·1	·29
—	—	—	—	—	—	—	—
26	—	2·5	—	22	6	1·1	·29
—	—	—	—	—	—	—	—
15	—	1·5	—	68	1	3·3	·05
—	—	—	—	—	—	—	—
4	—	·4	—	—	—	—	—
603	—	58·9	—	413	57	19·9	2·75
215	—	21·0	—	54	—	2·6	—
55	12	5·4	1·17	38	21	1·8	1·01
107	3	10·5	·29	106	3	5·1	·14
228	6	22·3	·59	259	86	12·5	4·15
9	—	·9	—	—	—	—	—
34	—	3·3	—	241	—	11·6	—
18	—	1·8	—	87	—	4·2	—
77	3	7·5	·29	9	1	·4	·05
755	14	73·8	1·37	3,303	138	159·4	6·66
884	5	86·4	·49	1,773	50	85·5	2·41
27	—	2·6	—	100	2	4·8	·10
25	3	2·4	·29	21	—	1·0	—
547	11	53·5	1·08	19	—	·9	—
19	—	1·9	—	25	—	1·2	—
82	—	8·0	—	135	1	6·5	·05
109	—	10·7	—	718	1	34·7	·05
—	—	—	—	6	2	·3	·10
1	—	·1	—	6	3	·3	·14
102	—	10·0	—	461	4	22·3	·19
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
4,472	63	437·2	6·16	11,046	440	532·9	21·22

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ABSTRACT No. II.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the TROOPS stationed at GIBRALTAR during the Year 1891, with the Ratios

Average Strength, 4,682. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	—
Other Eruptive Fevers	1	—	—	—	—	—	·04
Enteric Fever	11	3	—	3	3	—	2·31
Other Continued Fevers	103	—	—	—	10	—	12·51
Yellow Fever	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—
Dysentery	1	—	—	—	—	—	·07
Other Diseases	26	—	—	—	—	—	1·03
Total	142	3	—	3	13	—	15·98
Sub-Group II.—Malarial Fevers	—	—	—	—	—	—	—
Sub-Group III.—Septic Diseases	2	—	—	—	—	—	·15
Sub-Group IV. Syphilis, Primary	94	—	—	—	—	—	12·12
" Secondary	112	—	—	—	4	—	11·43
Gonorrhœa	406	—	—	—	—	—	27·51
Total	612	—	—	—	4	—	51·06
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	7	—	—	—	—	—	·16
Sub-Group II. Scurvy	1	—	—	—	—	—	·05
Alcoholism	35	—	—	—	—	—	1·39
GROUP "C."							
Debility, &c.	26	—	—	—	4	3	2·39
GROUP "D."							
Rheumatism	110	—	—	—	2	—	6·64
Tubercular Diseases	6	—	3	3	6	5	1·79
Other Diseases	31	—	—	—	1	1	2·00
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	45	3	—	3	7	4	2·99
Mental "	5	—	—	—	4	2	·57
2. Eye	52	—	—	—	7	5	5·78
3 & 4. Other Organs of Special Senses	37	—	—	—	2	1	2·58
5. Circulatory System	21	3	—	3	5	2	1·78
6. Respiratory "	127	1	1	2	4	1	7·28
7. Digestive "	377	3	—	3	1	—	14·34
8. Lymphatic and Glandular System	50	—	—	—	1	—	5·67
9. Urinary System	3	—	—	—	—	—	·10
10. Generative "	298	—	—	—	—	—	20·15
11. Organs of Locomotion	37	—	—	—	3	2	2·49
12. Connective Tissue	92	—	—	—	—	—	4·91
13. Skin	244	—	—	—	—	—	11·99
III.—POISONS	—	—	—	—	—	—	—
IV.—INJURIES.							
1. General	3	3	—	3	1	1	·75
2. Local	495	2	—	2	2	1	22·83
3. In Action	—	—	—	—	—	—	—
No appreciable disease	8	—	—	—	—	—	·20
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	2,866	18	4	22	67	28	186·02
* Average of 10 years, 1881-90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for the six 1886 to 1892 in

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among per 1,000 of the Strength, and the Average Ratios for 10 Years.*

	Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
	—	—	—	—	—	—	—	—	—	—
	·2	—	—	—	·01	·6	—	—	—	·04
	2·3	·64	·64	—	·49	14·5	2·30	5·24	—	2·55
	22·0	—	2·14	—	2·67	29·8	·09	4·55	·04	3·74
	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—
	·2	—	—	—	·01	·5	·04	—	—	·03
	5·6	—	—	—	·22	31·9	·04	—	—	·50
	30·3	·64	2·78	—	3·41	77·3	2·47	9·79	·04	6·86
	—	—	—	—	—	1·6	·04	·09	·09	·06
	·4	—	—	—	·03	·7	·09	—	—	·03
	20·1	—	—	—	2·59	36·5	—	—	—	3·48
	23·9	—	·85	—	2·44	30·9	·13	·87	·35	2·52
	86·7	—	—	—	5·88	106·5	—	—	—	6·10
	130·7	—	·85	—	10·91	173·9	·13	·87	·35	12·10
	—	—	—	—	—	—	—	—	—	—
	1·5	—	—	—	·04	·4	—	—	—	·01
	·2	—	—	—	·01	—	—	—	—	—
	7·5	—	—	—	·30	5·3	·04	—	—	·12
	5·6	—	·85	·64	·51	5·0	—	1·73	1·26	·35
	23·5	—	·43	—	1·43	34·0	—	1·73	·47	2·06
	1·3	·64	1·28	1·07	·38	2·2	·39	1·64	·91	·31
	6·6	—	·21	·21	·43	1·8	·22	·35	·22	·18
	9·6	·64	1·50	·85	·64	3·3	·17	·47	·56	·22
	1·1	—	·85	·43	·13	·5	—	·52	·47	·15
	11·1	—	1·50	1·07	1·23	11·7	—	·35	·47	·71
	7·9	—	·43	·21	·55	5·5	—	·26	·26	·27
	4·5	·64	1·07	·43	·38	1·4	·26	·61	·78	·16
	27·1	·43	·85	·21	1·56	26·1	·56	·83	·61	1·32
	80·5	·64	·21	—	3·06	77·6	·22	·26	·13	1·94
	10·7	—	·21	—	1·21	9·0	—	·09	·13	·94
	·6	—	—	—	·08	·9	·26	·26	·13	·11
	63·7	—	—	—	4·30	97·0	·04	—	·04	6·33
	7·9	—	·64	·43	·53	3·2	·04	·43	·26	·34
	19·7	—	—	—	1·05	16·1	—	·09	·09	·80
	53·1	—	—	—	2·56	35·6	—	—	·09	1·09
	—	—	—	—	—	·1	·04	—	—	—
	·6	·64	·21	·21	·16	·1	·13	—	—	·01
	105·7	·43	·43	·21	4·88	100·1	·43	·35	·35	3·94
	—	—	—	—	—	—	—	—	—	—
	1·7	—	—	—	·04	2·7	—	—	—	·09
	—	—	—	—	—	—	—	—	—	—
	612·1	4·70	14·31	5·98	39·73	698·1	5·54	20·76	7·71	40·52
	800·4	6·01	23·99	8·96	48·10	—	—	—	—	—

years 1886 to 1891 will be given in the Report for 1892; those for the seven years that for 1893, &c., &c.

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ABSTRACT No. III.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the TROOPS stationed at MALTA during the Year 1891, with the Ratios

Average Strength, 7,697. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	—
Other Eruptive Fevers	3	—	—	—	—	—	·14
Enteric Fever	48	19	—	19	12	—	8·88
Other Continued Fevers	840	9	—	9	36	—	59·69
Yellow Fever	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—
Dysentery	30	—	—	—	3	2	2·60
Other Diseases	6	—	—	—	—	—	·21
Total	927	28	—	28	51	2	71·16
Sub-Group II.—Malarial Fevers	19	1	—	1	—	—	·48
Sub-Group III.—Septic Diseases	7	—	—	—	—	—	·32
Sub-Group IV. Syphilis, Primary	248	—	—	—	—	—	28·69
" Secondary	168	—	—	—	3	5	16·90
Gonorrhœa	532	—	—	—	—	—	39·07
Total	948	—	—	—	3	5	84·66
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	5	—	—	—	—	—	·14
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Alcoholism	24	—	—	—	—	—	·91
GROUP "C."							
Debility, &c.	54	—	—	—	9	11	4·53
GROUP "D."							
Rheumatism	191	2	—	2	11	5	14·94
Tubercular Diseases	24	4	2	6	12	12	2·81
Other Diseases	27	1	—	1	—	2	1·26
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	83	1	1	2	6	10	5·53
Mental "	14	—	—	—	11	16	2·88
2. Eye	73	—	—	—	—	2	4·24
3 & 4. Other Organs of Special Senses	95	—	—	—	13	10	3·76
5. Circulatory System	48	1	—	1	17	18	4·55
6. Respiratory "	136	5	—	5	14	4	9·79
7. Digestive "	559	2	—	2	7	1	18·73
8. Lymphatic and Glandular System	60	—	—	—	2	1	5·13
9. Urinary System	15	1	—	1	7	8	1·93
10. Generative "	523	—	—	—	3	3	41·26
11. Organs of Locomotion	49	—	—	—	6	5	3·21
12. Connective Tissue	162	—	—	—	—	—	6·43
13. Skin	311	—	—	—	—	—	16·12
III.—POISONS.	—	—	—	—	—	—	—
IV.—INJURIES.							
1. General	5	1	—	1	—	—	·32
2. Local	680	—	—	—	6	3	33·43
3. In Action	—	—	—	—	—	—	—
No appreciable disease	15	—	—	—	—	—	·65
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	5,054	47	3	50	178	118	344·76
*Average of 10 years, 1881-90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios 1886 to 1892 in

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	·1	—	—	—	·01
·4	—	—	—	·02	·4	—	—	—	·02
6·2	2·46	1·56	—	1·10	4·8	1·72	·50	—	1·00
109·1	1·17	4·67	—	7·75	96·1	1·03	2·82	·17	8·28
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	·03	—	—	—
3·9	—	·39	·26	·34	5·4	·33	·18	·03	·44
·8	—	—	—	·03	6·3	·07	·03	—	·17
120·4	3·63	6·62	·26	9·24	113·1	3·18	3·48	·20	9·92
2·5	·13	—	—	·06	2·0	·27	·10	—	·19
·9	—	—	—	·04	·6	·03	—	—	·04
32·2	—	—	—	3·73	13·0	—	—	—	1·28
21·8	—	·39	·65	2·19	11·7	·03	·46	·23	1·08
69·1	—	—	—	5·08	51·7	—	·10	—	3·60
123·1	—	·39	·65	11·00	76·4	·03	·56	·23	5·96
—	—	—	—	—	—	—	—	—	—
·7	—	—	—	·02	1·6	—	—	·03	·04
—	—	—	—	—	—	—	—	—	—
3·1	—	—	—	·12	2·6	·03	·03	—	·09
7·0	—	1·17	1·43	·59	12·8	—	1·19	·76	1·22
24·8	·26	1·43	·65	1·94	28·0	·07	·90	·56	1·99
3·1	·78	1·56	1·56	·37	2·5	·83	1·76	1·39	·43
3·5	·13	—	·26	·16	3·3	·03	·10	·20	·21
10·8	·26	·78	1·30	·72	5·6	·20	·76	·83	·38
1·8	—	1·43	2·08	·37	1·4	·10	1·19	1·10	·29
9·5	—	—	·26	·55	10·7	—	·56	·37	·63
12·3	—	1·69	1·30	1·14	10·0	—	·70	·53	·56
6·2	·13	2·21	2·34	·59	8·7	·23	1·53	1·49	·75
17·7	·65	1·82	·51	1·27	21·5	·46	1·53	·83	1·81
72·6	·26	·91	·13	2·43	87·0	·63	·56	·20	3·02
7·8	—	·26	·13	·67	5·6	—	·13	·03	·52
2·0	·13	·91	1·04	·25	2·3	—	·53	·27	·18
68·0	—	·39	·39	5·36	33·7	—	·53	·37	2·40
6·4	—	·78	·65	·50	6·1	·03	·33	·27	·49
21·0	—	—	—	·84	26·3	·03	·10	·03	1·00
40·4	—	—	—	2·10	37·4	—	·27	·03	1·79
—	—	—	—	—	·1	·07	—	—	—
·7	·13	—	—	·04	·5	·66	·03	—	·03
88·3	—	·78	·39	4·34	83·9	·37	·63	·46	3·78
—	—	—	—	—	—	—	—	—	—
2·0	—	—	—	·08	1·6	—	—	—	·07
—	—	—	—	—	—	—	—	—	—
656·6	6·49	23·13	15·33	44·79	585·3	7·26	17·50	10·24	37·79
698·7	8·70	22·34	11·62	45·48	—	—	—	—	—

for the six years 1886 to 1891 will be given in the Report for 1892; those for the seven years that for 1893, &c., &c.

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ABSTRACT No. IIIA.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the ROYAL MALTA ARTILLERY stationed at MALTA during the Year 1891,

Average Strength, 365. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	—
Other Eruptive Fevers	—	—	—	—	—	—	—
Enteric Fever	—	—	—	—	—	—	—
Other Continued Fevers	17	—	—	—	—	—	·76
Yellow Fever	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—
Dysentery	—	—	—	—	—	—	—
Other Diseases	—	—	—	—	—	—	—
Total	17	—	—	—	—	—	·76
Sub-Group II.—Malarial Fevers	—	—	—	—	—	—	—
Sub-Group III.—Septic Diseases	2	—	—	—	—	—	·11
Sub-Group IV. Syphilis, Primary	4	—	—	—	—	—	·32
„ Secondary	3	—	—	—	—	—	·29
Gonorrhœa	8	—	—	—	—	—	·59
Total	15	—	—	—	—	—	1·20
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	1	—	—	—	—	—	·01
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Alcoholism	—	—	—	—	—	—	—
GROUP "C."							
Debility, &c.	8	—	—	—	—	—	·87
GROUP "D."							
Rheumatism	11	—	—	—	—	—	·24
Tubercular Diseases	1	—	—	—	—	—	·07
Other Diseases	1	—	—	—	—	—	·02
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	2	—	—	—	—	—	·10
Mental „	—	—	—	—	—	—	—
2. Eye	7	—	—	—	—	—	·25
3 & 4. Other Organs of Special Senses	6	—	—	—	—	—	·18
5. Circulatory System	—	—	—	—	—	—	—
6. Respiratory „	30	—	—	—	—	—	·85
7. Digestive „	34	—	—	—	—	—	·65
8. Lymphatic and Glandular System	1	—	—	—	—	—	·01
9. Urinary System	2	—	—	—	—	1	·12
10. Generative „	3	—	—	—	—	—	·19
11. Organs of Locomotion	—	—	—	—	—	—	—
12. Connective Tissue	2	—	—	—	—	—	·20
13. Skin	23	—	—	—	—	—	·60
III.—POISONS.							
IV.—INJURIES.							
1. General	—	—	—	—	—	—	—
2. Local	50	1	—	1	—	—	1·45
3. In Action	—	—	—	—	—	—	—
No appreciable disease	—	—	—	—	—	—	—
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	216	1	—	1	—	1	7·38
* Average of 10 years, 1881–90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios 1886 to 1892 in

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among with the Ratios per 1,000 of the Strength and the average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1·1	—	—	—	·05
—	—	—	—	—	·6	·55	—	—	—
46·6	—	—	—	2·08	64·0	—	—	—	2·52
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	·6	·55	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	16·0	—	—	—	·36
46·6	—	—	—	2·08	82·2	1·10	—	—	2·93
—	—	—	—	—	2·2	—	—	—	·04
5·5	—	—	—	·30	·6	—	—	—	·01
11·0	—	—	—	·88	11·6	—	—	—	·89
8·2	—	—	—	·79	8·3	—	—	·55	·86
21·9	—	—	—	1·62	35·9	—	—	·55	3·06
41·1	—	—	—	3·29	55·8	—	—	1·10	4·81
—	—	—	—	—	—	—	—	—	—
2·7	—	—	—	·03	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
21·9	—	—	—	1·01	14·9	—	—	4·42	1·04
30·1	—	—	—	·66	24·3	—	—	—	·96
2·7	—	—	—	·19	1·1	—	—	1·10	·46
2·7	—	—	—	·05	6·6	—	—	·55	·39
5·5	—	—	—	·27	6·1	—	—	·55	·16
—	—	—	—	—	—	—	—	—	—
19·2	—	—	—	·69	24·8	—	—	1·10	1·08
16·4	—	—	—	·49	7·7	—	—	·55	·21
—	—	—	—	—	4·4	·55	—	1·66	·52
82·2	—	—	—	2·33	69·5	—	—	1·10	3·42
93·2	—	—	—	1·78	97·7	—	—	1·10	2·05
2·7	—	—	—	·03	3·3	—	—	—	·09
5·5	—	—	2·74	·33	1·7	—	—	—	·09
8·2	—	—	—	·52	5·5	—	—	—	·11
—	—	—	—	—	7·7	—	—	2·21	·47
5·5	—	—	—	·55	16·0	—	—	—	·36
63·0	—	—	—	1·64	68·4	—	—	—	1·94
—	—	—	—	—	—	—	—	—	—
137·0	2·74	—	—	3·97	137·4	·55	—	1·10	4·18
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	·6	—	—	—	·02
—	—	—	—	—	—	—	—	—	—
591·7	2·74	—	2·74	20·21	638·5	2·21	—	16·55	25·34
660·8	4·26	—	16·77	24·96	—	—	—	—	—

for the six years 1886 to 1891 will be given in the Report for 1892; those for the seven years that for 1893, &c., &c.

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ABSTRACT No. IV.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the TROOPS stationed at CYPRUS during the Year 1891, with the Ratios

Average Strength, 554. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	—
Other Eruptive Fevers	—	—	—	—	—	—	—
Enteric Fever	—	—	—	—	—	—	—
Other Continued Fevers	49	—	—	—	—	—	1·64
Yellow Fever	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—
Dysentery	2	—	—	—	—	—	·07
Other Diseases	3	—	—	—	—	—	·11
Total	54	—	—	—	—	—	1·82
Sub-Group II.—Malarial Fevers	5	—	—	—	—	—	·12
Sub-Group III.—Septic Diseases	2	—	—	—	—	—	·04
Sub-Group IV. Syphilis, Primary	12	—	—	—	—	—	1·11
" Secondary	6	—	—	—	—	—	·42
Gonorrhœa	36	—	—	—	—	—	2·49
Total	54	—	—	—	—	—	4·02
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	—	—	—	—	—	—	—
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Alcoholism	—	—	—	—	—	—	—
GROUP "C."							
Debility, &c.	13	—	—	—	5	—	·54
GROUP "D."							
Rheumatism	8	—	—	—	—	—	·42
Tubercular Diseases	—	—	—	—	—	—	—
Other Diseases	1	—	—	—	—	1	·02
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	2	—	—	—	1	1	·40
Mental "	—	—	—	—	—	1	—
2. Eye	3	—	—	—	—	—	·20
3 & 4. Other Organs of Special Senses	—	—	—	—	—	—	—
5. Circulatory System	1	—	—	—	—	—	·01
6. Respiratory "	5	—	—	—	—	—	·25
7. Digestive "	40	1	—	1	—	1	1·13
8. Lymphatic and Glandular System	19	—	—	—	—	—	1·90
9. Urinary System	2	—	—	—	—	—	·06
10. Generative "	30	—	—	—	—	1	1·50
11. Organs of Locomotion	3	—	—	—	—	—	·19
12. Connective Tissue	14	—	—	—	—	—	·39
13. Skin	27	—	—	—	—	—	·76
III.—POISONS.	1	1	—	1	—	—	·02
IV.—INJURIES.							
1. General	—	—	—	—	—	—	—
2. Local	27	—	—	—	—	—	1·25
3. In Action	—	—	—	—	—	—	—
No appreciable disease	—	—	—	—	—	—	—
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	311	2	—	2	6	5	15·04
* Average of 10 years, 1881–90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios years 1886 to 1892 in

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among per 1,000 of the Strength and the average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	·6	—	—	—	·06
—	—	—	—	—	7·8	2·49	1·25	—	1·37
88·4	—	—	—	2·96	63·1	—	—	—	2·00
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
3·6	—	—	—	·12	16·2	·31	—	—	·93
5·4	—	—	—	·20	9·3	—	—	—	·21
97·5	—	—	—	3·28	97·0	2·80	1·25	—	4·57
9·0	—	—	—	·22	77·1	·31	·62	—	2·11
3·6	—	—	—	·07	1·6	—	—	—	·09
21·7	—	—	—	2·00	102·9	—	—	—	9·10
10·8	—	—	—	·76	49·8	—	·93	·31	4·40
65·0	—	—	—	4·49	98·0	—	—	—	5·51
97·5	—	—	—	7·26	250·7	—	·93	·51	19·01
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1·6	—	—	—	·02
—	—	—	—	—	·9	—	—	—	·07
—	—	—	—	—	3·4	·31	—	—	·20
23·5	—	9·02	—	·97	12·8	—	1·55	·31	1·03
14·5	—	—	—	·76	22·7	—	—	—	1·23
—	—	—	—	—	·3	·31	·31	·62	·19
1·8	—	—	1·80	·04	1·9	—	—	—	·15
3·6	—	1·80	1·80	·72	2·5	·31	1·25	·93	·09
—	—	—	1·80	—	·9	—	·93	·31	·29
5·4	—	—	—	·36	10·3	—	·31	·31	·48
—	—	—	—	—	3·7	·31	·31	·62	·20
1·8	—	—	—	·02	·6	·31	·31	·31	·19
9·0	—	—	—	·45	14·9	·31	·62	·62	·80
72·2	1·80	—	1·80	2·04	87·7	—	·62	—	3·53
34·3	—	—	—	3·43	24·6	—	—	·31	2·35
3·6	—	—	—	·11	·6	—	—	—	·02
54·1	—	—	1·80	2·71	58·5	—	—	—	4·31
5·4	—	—	—	·34	7·2	—	·62	·62	·48
25·3	—	—	—	·70	25·8	—	·31	—	1·43
48·7	—	—	—	1·37	41·7	—	—	—	1·72
1·8	1·80	—	—	·04	·3	—	—	—	·03
—	—	—	—	—	·3	—	—	—	·01
46·7	—	—	—	2·26	86·8	·31	·31	·31	3·64
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	·3	—	—	—	·03
—	—	—	—	—	—	—	—	—	—
561·3	3·61	10·83	9·02	27·15	836·7	5·28	10·26	5·59	48·77
841·1	8·90	13·84	4·78	42·84	—	—	—	—	—

for the six years 1886 to 1891 will be given in the Report for 1892; those for the seven that for 1893, &c., &c.

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ABSTRACT No. V.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the TROOPS stationed in CANADA during the Year 1891, with the

Average Strength, 1,424. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	—
Other Eruptive Fevers	—	—	—	—	—	—	—
Enteric Fever	—	—	—	—	—	—	—
Other Continued Fevers	3	—	—	—	—	—	·07
Yellow Fever	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—
Dysentery	—	—	—	—	—	—	—
Other Diseases	14	—	—	—	—	—	·25
Total	17	—	—	—	—	—	·32
Sub-Group II.—Malarial Fevers	2	—	—	—	—	—	·06
Sub-Group III.—Septic Diseases	3	—	—	—	—	—	·23
Sub-Group IV. Syphilis, Primary	30	—	—	—	—	—	1·44
„ Secondary	14	—	—	—	—	—	1·26
Gonorrhœa	56	—	—	—	—	—	2·69
Total	100	—	—	—	—	—	5·39
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	—	—	—	—	—	—	—
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Alcoholism	2	—	—	—	—	—	·06
GROUP "C."							
Debility, &c.	5	—	—	—	—	1	·17
GROUP "D."							
Rheumatism	35	—	—	—	—	—	2·64
Tubercular Diseases	5	1	1	2	3	2	·66
Other Diseases	2	—	—	—	—	1	·16
II.—LOCAL DISEASES.							
Diseases of the— 1. Nervous System Nervous Diseases	9	2	—	2	2	2	·41
Mental „	—	—	—	—	—	—	—
2. Eye	12	—	—	—	1	—	·45
3 & 4. Other Organs of Special Senses	9	—	—	—	—	—	·25
5. Circulatory System	9	2	—	2	1	6	·69
6. Respiratory „	35	—	—	—	1	2	1·41
7. Digestive „	78	1	—	1	—	—	1·59
8. Lymphatic and Glandular System	23	—	—	—	—	—	2·37
9. Urinary System	5	—	—	—		—	·34
10. Generative „	17	—	—	—		1	·70
11. Organs of Locomotion	10	—	—	—	—	—	·16
12. Connective Tissue	23	—	—	—	—	—	·73
13. Skin	35	—	—	—	—	—	1·00
III.—POISONS.	—	—	—	—	—	—	—
IV.—INJURIES.							
1. General	—	1	—	1	—	—	—
2. Local	94	—	—	—	1	3	4·51
3. In Action	—	—	—	—	—	—	—
No appreciable disease	2	—	—	—	—	—	·07
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	531	7	1	8	11	18	24·37
*Average of 10 years 1881–90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for 1886 to 1892 in that

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1·3	—	—	—	·05
—	—	—	—	—	2·7	·30	·15	—	·52
2·1	—	—	—	·05	4·0	—	—	—	·19
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
9·8	—	—	—	·17	6·3	—	—	—	·26
11·9	—	—	—	·22	14·3	·30	·15	—	1·02
1·4	—	—	—	·04	·2	—	—	—	—
2·1	—	—	—	·16	3·1	—	—	—	·15
21·1	—	—	—	1·01	29·7	—	—	—	2·18
9·8	—	—	—	·88	28·5	—	1·04	·89	2·48
39·3	—	—	—	1·89	71·4	—	—	—	3·97
70·2	—	—	—	3·78	129·6	—	1·04	·89	8·63
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	·3	—	—	—	·01
—	—	—	—	—	—	—	—	—	—
1·4	—	—	—	·04	1·9	—	—	—	·06
3·5	—	—	·70	·12	3·3	—	1·49	·89	·24
24·6	—	—	—	1·86	34·2	—	·75	·15	2·33
3·5	1·40	2·11	1·40	·46	1·6	·60	1·04	1·04	·21
1·4	—	—	·70	·11	3·6	—	·60	·89	·26
6·3	1·40	1·40	1·40	·29	10·2	·45	2·84	2·24	·97
—	—	—	—	—	·7	·15	·60	·60	·17
8·4	—	·70	—	·32	10·2	—	·60	1·04	·47
6·3	—	—	—	·18	6·9	—	·89	1·04	·66
6·3	1·40	·70	4·21	·48	12·8	·30	2·99	2·69	1·23
24·6	—	·70	1·40	·99	40·8	·89	1·64	1·64	2·84
54·8	·70	—	—	1·12	69·9	·30	·45	·30	1·83
15·5	—	—	—	1·67	12·8	—	—	—	1·35
3·5	—	·70	—	·24	3·1	·30	·75	·30	·40
11·9	—	·70	·70	·49	28·5	—	·30	·15	1·42
7·0	—	—	—	·11	8·2	—	04	·60	·81
16·2	—	—	—	·51	21·2	—	30	—	1·02
24 6	—	—	—	·70	38·1	—	15	·45	1·60
—	—	—	—	—	·3	·30	—	—	—
—	·70	—	—	—	·3	·60	—	—	·02
66·0	—	·70	2·11	3·17	67·8	·60	·75	·30	2·99
—	—	—	—	—	—	—	—	—	—
1·4	—	—	—	·05	1·5	—	—	—	·07
—	—	—	—	—	—	—	—	—	—
373·8	5·61	7·72	12·64	17·11	525·4	4·78	18·37	15·23	30·76
639·3	5·21	23·23	19·75	35·59	—	—	—	—	—

the six years, 1886 to 1891, will be given in the Report for 1892; those for the seven years for 1893, &c., &c.

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ABSTRACT No. VI.—Table showing the Average Strength, Admissions the Troops stationed at Bermuda during the Year 1891, with the Ratios

Average Strength, 1,601. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
I.—GENERAL DISEASES.							
Group "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	—
Sub-Group I. Other Eruptive Fevers	—	—	—	—	—	—	—
Sub-Group I. Enteric Fever	27	5	—	5	—	—	3·80
Sub-Group I. Other Continued Fevers	21	—	—	—	—	—	1·06
Sub-Group I. Yellow Fever	—	—	—	—	—	—	—
Sub-Group I. Cholera	—	—	—	—	—	—	—
Sub-Group I. Dysentery	—	—	—	—	1	1	·16
Sub-Group I. Other Diseases	8	—	—	—	—	—	·28
Total	56	5	—	5	1	1	5·30
Sub-Group II.—Malarial Fevers	—	—	—	—	—	—	—
Sub-Group III.—Septic Diseases	1	—	—	—	—	—	·04
Sub-Group IV. Syphilis, Primary	9	—	—	—	—	—	·74
Sub-Group IV. „ Secondary	35	—	—	—	1	1	3·27
Sub-Group IV. Gonorrhœa	19	—	—	—	—	—	1·19
Total	63	—	—	—	1	1	5·20
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
Group "B."							
Sub-Group I.—Parasitic Diseases	1	—	—	—	—	—	·06
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Sub-Group II. Alcoholism	14	—	—	—	—	—	·65
Group "C."							
Debility, &c.	13	—	—	—	4	1	·96
Group "D."							
Rheumatism	17	—	—	—	—	—	1·53
Tubercular Diseases	—	—	—	—	3	3	·48
Other Diseases	4	—	—	—	—	—	·43
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	21	—	—	—	1	1	·51
1. Nervous System Mental „	2	—	—	—	2	2	·49
2. Eye	15	—	—	—	1	2	1·15
3 & 4. Other Organs of Special Senses	7	—	—	—	—	—	·17
5. Circulatory System	4	—	—	—	1	1	·40
6. Respiratory „	26	—	—	—	3	2	1·95
7. Digestive „	137	—	—	—	—	—	4·05
8. Lymphatic and Glandular System	11	—	—	—	—	—	1·16
9. Urinary System	3	—	—	—	—	—	·08
10. Generative „	27	—	—	—	1	—	1·76
11. Organs of Locomotion	21	—	—	—	1	1	1·30
12. Connective Tissue	58	—	—	—	—	—	1·55
13. Skin	74	—	—	—	—	—	2·48
III.—POISONS	—	—	—	—	—	—	—
IV.—INJURIES.							
1. General	2	—	—	—	—	—	·18
2. Local	190	—	—	—	5	2	8·69
3. In Action	—	—	—	—	—	—	—
No appreciable disease	6	—	—	—	—	—	·07
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	773	5	—	5	24	17	40·89
* Average of 10 years, 1881-90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for 1886 to 1892

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
16·9	3·12	—	—	2·37	44·6	6·95	—	—	5·47
13·1	—	—	—	·66	31·1	—	—	—	1·30
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	·62	·62	·16	1·8	·30	—	—	·11
5·0	—	—	—	·18	6·3	—	—	—	·12
35·0	3·12	·62	·62	3·31	83·8	7·25	—	—	7·00
—	—	—	—	—	·6	—	—	—	·01
·6	—	—	—	·02	—	—	—	—	—
5·6	—	—	—	·46	19·8	—	—	—	1·76
21·9	—	·62	·62	2·04	22·8	—	·76	·60	1·74
11·9	—	—	—	·74	21·7	—	—	—	1·41
39·4	—	·62	·62	3·24	64·3	—	·76	·60	4·62
—	—	—	—	—	—	—	—	—	—
·6	—	—	—	·04	·5	—	—	—	·01
—	—	—	—	—	—	—	—	—	—
8·7	—	—	—	·41	8·3	·15	—	—	·23
8·1	—	2·50	·62	·60	14·3	—	1·36	·76	·89
10·6	—	—	—	·99	20·5	—	·91	·76	1·13
—	—	1·87	1·87	·30	3·0	·91	1·51	1·51	·37
2·5	—	—	—	·27	4·5	—	·30	—	·27
13·1	—	·62	·62	·33	5·6	·76	·76	·30	·35
1·3	—	1·25	1·25	·31	1·7	—	·91	·91	·22
9·4	—	·62	1·25	·72	15·1	—	·91	·60	·72
4·4	—	—	—	·11	9·5	—	·76	1·06	·47
2·5	—	·62	·62	·25	11·5	·60	2·57	2·26	·84
16·2	—	1·87	1·25	1·23	31·1	·76	1·96	1·51	1·66
85·6	—	—	—	2·53	111·4	·45	1·81	1·21	3·34
6·9	—	—	—	·72	16·5	—	·15	·30	1·36
1·9	—	—	—	·05	2·1	·15	·15	—	·09
16·9	—	·62	—	1·10	20·4	—	—	·15	1·82
13·1	—	·62	·62	·81	5·5	—	1·51	1·36	·73
36·2	—	—	—	·97	29·7	—	—	—	·99
46·2	—	—	—	1·55	60·9	—	·15	—	2·60
—	—	—	—	—	·5	·15	—	—	·04
1·2	—	—	—	·11	1·2	·60	—	—	·12
118·7	—	3·12	1·25	5·43	103·3	·60	·30	·30	3·44
—	—	—	—	—	—	—	—	—	—
3·7	—	—	—	·04	3·6	—	—	—	·08
—	—	—	—	—	—	—	—	—	—
482·8	3·12	14·99	10·61	25·42	632·4	12·38	16·76	13·59	32·49
623·9	10·49	14·77	9·92	32·19	—	—	—	—	—

the six years 1886 to 1891 will be given in the Report for 1892; those for the seven years in that for 1893, &c., &c.

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ABSTRACT No. VII.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the WHITE TROOPS stationed in the WEST INDIES during the Year 1891, with

Average Strength, 1,096. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	—
Other Eruptive Fevers	1	—	—	—	—	—	·02
Enteric Fever	15	3	—	3	—	—	2·68
Other Continued Fevers	137	—	—	—	—	—	6·02
Yellow Fever	6	4	—	4	—	—	·13
Cholera	—	—	—	—	—	—	—
Dysentery	10	2	—	2	—	—	·86
Other Diseases	—	—	—	—	—	—	—
Total	169	9	--	9	—	—	9·71
Sub-Group II.—Malarial Fevers	122	3	—	3	2	—	5·55
Sub-Group III.—Septic Diseases	—	—	—	—	—	—	—
Sub-Group IV. Syphilis, Primary	58	—	—	—	—	—	5·73
" Secondary	53	1	—	1	3	1	4·61
Gonorrhœa	196	—	—	—	2	—	15·29
Total	307	1	—	1	5	1	25·63
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	—	—	—	—	—	—	—
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Alcoholism	1	—	—	—	—	—	·06
GROUP "C."							
Debility, &c.	12	—	—	—	4	1	·89
GROUP "D."							
Rheumatism	38	—	—	—	1	1	2·97
Tubercular Diseases	1	—	—	—	—	—	·05
Other Diseases	10	—	—	—	—	—	·54
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	15	—	—	—	2	2	1·32
Mental "	2	—	—	—	1	1	·55
2. Eye	12	—	—	—	2	1	1·06
3 & 4. Other Organs of Special Senses	26	—	—	—	—	—	·81
5. Circulatory System	10	—	—	—	—	2	·96
6. Respiratory "	44	2	—	2	—	—	1·94
7. Digestive "	167	—	—	—	2	1	5·01
8. Lymphatic and Glandular System	40	—	—	—	1	—	4·03
9. Urinary System	—	—	—	—	—	—	—
10. Generative "	162	—	—	—	—	—	13·03
11. Organs of Locomotion	6	—	—	—	—	—	·45
12. Connective Tissue	42	—	—	—	—	—	1·41
13. Skin	64	—	—	—	—	—	2·30
III.—POISONS	—	—	—	—	—	—	—
IV.—INJURIES.							
1. Genera	—	—	—	—	—	—	—
2. Local	137	—	—	—	—	—	5·39
3. In Action	—	—	—	—	—	—	—
No appreciable disease	4	—	—	—	—	—	·12
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	1,391	15	—	15	20	10	82·78
* Average of 10 Years 1881-90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for the 1886 to 1892 in that

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
·9	—	—	—	·02	8·7	—	—	—	·20
13·7	2·74	—	—	2·45	12·2	2·22	—	—	1·68
125·0	—	—	—	5·49	108·3	·37	—	—	3·59
5·5	3·63	—	—	·12	·4	·37	—	—	·01
—	—	—	—	—	—	—	—	—	—
9·1	1·82	—	—	·78	8·3	·55	·19	—	·34
—	—	—	—	—	12·0	—	—	—	·23
154·2	8·21	—	—	8·86	149·9	3·51	·19	—	6·07
111·3	2·74	1·82	—	5·06	30·9	·92	·19	—	1·47
—	—	—	—	—	·9	—	—	—	·05
52·9	—	—	—	5·23	38·4	—	—	—	3·01
48·4	·91	2·74	·91	4·21	30·1	·19	2·22	1·11	3·10
178·8	—	1·82	—	13·95	139·4	—	—	—	9·11
180·1	·91	4·56	·91	23·39	207·9	·19	2·22	1·11	15·22
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	2·0	—	—	—	·05
—	—	—	—	—	—	—	—	—	—
·9	—	—	—	·06	9·1	—	—	—	·23
10·9	—	3·65	·91	·81	15·7	—	1·85	1·11	·87
34·7	—	·91	·91	2·71	35·7	·19	·92	·37	1·76
·9	—	—	—	·05	1·3	·19	1·11	·92	·21
9·1	—	—	—	·49	5·7	—	·37	·19	·42
13·7	—	1·82	1·82	1·21	12·9	·37	2·03	1·66	·84
1·8	—	·91	·91	·50	·6	—	·37	·74	·09
10·9	—	1·82	·91	·97	15·5	—	·55	·55	·86
23·7	—	—	—	·74	19·6	—	·19	·55	·57
9·1	—	—	1·82	·88	12·6	·37	2·22	1·85	·82
40·2	1·82	—	—	1·77	32·3	·92	·55	1·11	1·65
152·4	—	1·82	·91	4·57	107·9	·37	1·29	·92	2·82
36·5	—	·91	—	3·68	41·8	—	—	·19	3·98
—	—	—	—	—	2·2	·37	·19	·19	·11
147·8	—	—	—	10·95	107·6	—	·37	·37	7·10
5·5	—	—	—	·41	7·8	·19	1·48	·55	·67
38·3	—	—	—	1·29	35·3	—	—	·19	1·49
58·4	—	—	—	2·10	87·8	—	·55	·19	3·33
—	—	—	—	—	·4	—	—	—	—
—	—	—	—	—	·4	·19	—	—	·11
125·0	—	—	—	4·92	161·7	·92	·74	·55	5·22
—	—	—	—	—	—	—	—	—	—
3·7	—	—	—	·11	4·6	—	—	—	·09
—	—	—	—	—	—	·19	—	—	—
1269·1	13·69	18·25	9·12	75·53	1110·1	8·87	17·37	13·31	56·10
1035·0	14·52	23·16	14·52	51·16	—	—	—	—	—

six years 1886 to 1891 will be given in the Report for 1892; those for the seven years for 1893, &c., &c.

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ABSTRACT No. VIII.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS the BLACK TROOPS stationed in the WEST INDIES during the Year 1891, with

Average Strength, 1,375. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	—
Other Eruptive Fevers	36	—	—	—	—	—	1·06
Enteric Fever	2	2	—	2	—	—	·10
Other Continued Fevers	176	2	—	2	—	—	6·03
Yellow Fever	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—
Dysentery	19	—	—	—	—	—	1·23
Other Diseases	6	—	—	—	—	—	·13
Total	239	4	—	4	—	—	8·55
Sub-Group II.—Malarial Fevers	220	1	—	1	—	—	5·21
Sub-Group III.—Septic Diseases	—	—	—	—	—	—	—
Sub-Group IV. Syphilis, Primary	193	—	—	—	—	—	20·35
„ Secondary	53	—	—	—	—	12	5·73
Gonorrhœa	302	—	—	—	—	—	20·41
Total	548	—	—	—	—	12	46·49
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	—	—	—	—	—	—	—
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Alcoholism	—	—	—	—	—	—	—
GROUP "C."							
Debility, &c.	16	—	—	—	—	8	1·44
GROUP "D."							
Rheumatism	68	—	—	—	—	8	4·47
Tubercular Diseases	15	3	—	3	—	12	2·66
Other Diseases	10	—	—	—	—	8	1·65
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	17	—	—	—	—	6	1·58
Mental „	5	—	—	—	—	5	1·30
2. Eye	31	—	—	—	—	3	1·93
3 & 4. Other Organs of Special Senses	5	—	—	—	—	—	·05
5. Circulatory System	12	1	—	1	—	3	1·46
6. Respiratory „	64	4	—	4	—	2	4·01
7. Digestive „	96	1	—	1	—	2	2·64
8. Lymphatic and Glandular System	85	—	—	—	—	3	6·86
9. Urinary System	5	1	—	1	—	1	·79
10. Generative „	140	—	—	—	—	1	9·44
11. Organs of Locomotion	17	—	—	—	—	6	1·41
12. Connective Tissue	57	—	—	—	—	—	3·06
13. Skin	81	—	—	—	—	—	2·97
III.—POISONS	—	—	—	—	—	—	—
IV.—INJURIES.							
1. General	—	1	—	1	—	—	—
2. Local	132	—	—	—	—	—	3·84
3. In Action	—	—	—	—	—	—	—
No appreciable disease	16	—	—	—	—	—	·29
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	1,879	16	—	16	—	80	112·10
* Average of 10 years, 1881-90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for 1886 to 1892 in

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	·2	—	—	—	·03
26·2	—	—	—	·77	14·3	—	—	—	·85
1·4	1·45	—	—	·07	1·8	·54	—	—	·16
128·0	1·45	—	—	4·39	112·4	·18	—	—	3·69
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
13·8	—	—	—	·89	13·6	·54	—	·18	·67
4·4	—	—	—	·09	16·9	—	—	—	·35
173·8	2·91	—	—	6·22	159·2	1·27	—	·18	5·7
160·0	·73	—	—	3·79	115·2	2·54	—	·36	3·33
—	—	—	—	—	·7	—	—	—	·03
140·4	—	—	—	14·80	87·5	—	—	—	7·81
38·5	—	—	8·73	4·17	45·0	·18	—	4·54	3·55
219·6	—	—	—	14·84	164·6	—	—	·18	8·90
398·5	—	—	8·73	33·81	297·1	·18	—	4·72	20·26
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	·7	—	—	—	·01
—	—	—	—	—	·2	—	—	—	·02
—	—	—	—	—	·2	—	—	—	—
11·6	—	—	5·82	1·05	7·6	—	—	3·45	·52
49·5	—	—	5·82	3·25	71·0	—	—	2·36	3·87
10·9	2·18	—	8·73	1·93	6·9	2·90	—	4·72	1·04
7·3	—	—	5·82	1·20	5·8	·18	—	3·81	·82
12·4	—	—	4·36	1·15	12·7	·54	—	3·08	·78
3·6	—	—	3·64	·94	·9	—	—	1·09	·27
23·6	—	—	2·18	1·40	30·0	—	—	2·72	2·11
3·6	—	—	—	·04	5·8	·18	—	·91	·60
8·7	·73	—	2·18	1·06	16·7	1·45	—	5·08	1·56
46·6	2·91	—	1·45	2·92	54·6	2·72	—	2·00	3·62
69·8	·73	—	1·45	1·92	74·1	1·27	—	2·18	2·05
61·8	—	—	2·18	4·99	45·0	—	—	1·09	3·82
3·6	·73	—	·73	·57	2·2	·36	—	·91	·22
101·8	—	—	·73	6·87	147·0	—	—	2·54	11·30
12·4	—	—	4·36	1·02	10·7	—	—	3·08	·75
41·5	—	—	—	2·23	34·3	—	—	·18	1·68
53·9	—	—	—	2·16	78·2	—	—	1·09	3·38
—	—	—	—	—	—	—	—	—	—
—	·73	—	—	—	·9	·54	—	—	·01
96·0	—	—	—	2·79	85·5	·36	—	1·09	2·91
—	—	—	—	—	—	—	—	—	—
11·6	—	—	—	·21	7·4	—	—	—	·14
—	—	—	—	—	—	—	—	—	—
1366·5	11·64	—	58·18	81·52	1270·6	14·51	—	46·64	70·84
1146·4	14·14	—	43·23	64·89	—	—	—	—	—

the six years 1886 to 1891, will be given in the Report for 1892; those for the seven years that for 1893, &c., &c

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ABSTRACT No. IX.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the BLACK TROOPS stationed at WEST AFRICA during the Year 1891

Average Strength, 581. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent to West Indies.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	—
Other Eruptive Fevers	1	—	—	—	—	—	·03
Enteric Fever	1	1	—	1	—	—	·30
Other Continued Fevers	—	—	—	—	—	—	—
Yellow Fever	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—
Dysentery	6	1	1	2	1	—	·26
Other Diseases	3	—	—	—	—	—	·15
Total	11	2	1	3	1	—	·74
Sub-Group II.—Malarial Fevers	339	—	—	—	2	—	7·47
Sub-Group III.—Septic Diseases	—	—	—	—	—	—	—
Sub-Group IV. Syphilis, Primary	30	—	—	—	1	—	2·60
" Secondary	30	—	—	—	8	5	3·42
Gonorrhœa	86	—	—	—	—	—	5·46
Total	146	—	—	—	9	5	11·50
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	7	—	—	—	—	—	·15
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Alcoholism	—	—	—	—	—	—	—
GROUP "C."							
Debility, &c.	10	—	—	—	10	—	1·04
GROUP "D."							
Rheumatism	61	—	—	—	7	3	4·69
Tubercular Diseases	3	1	—	1	2	2	·23
Other Diseases	3	1	—	1	3	—	·14
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	6	—	—	—	—	—	·37
Mental "	2	—	—	—	1	1	·05
2. Eye	12	—	—	—	1	1	1·19
3 & 4. Other Organs of Special Senses	7	—	—	—	—	—	·48
5. Circulatory System	2	1	—	1	—	—	·05
6. Respiratory "	18	3	—	3	—	—	1·26
7. Digestive "	16	—	—	—	1	1	·66
8. Lymphatic and Glandular System	28	—	—	—	2	—	2·01
9. Urinary System	—	—	—	—	—	—	—
10. Generative "	44	—	—	—	—	—	4·01
11. Organs of Locomotion	8	—	1	1	4	4	1·01
12. Connective Tissue	30	—	—	—	—	—	2·01
13. Skin	55	—	—	—	—	—	3·89
III.—POISONS.	—	—	—	—	—	—	—
IV.—INJURIES.							
1. General	—	—	—	—	—	—	—
2. Local	39	—	—	—	—	—	2·33
3. In Action	—	—	—	—	—	—	—
No appreciable disease	—	—	—	—	—	—	—
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	856	8	2	10	43	17	45·28
* Average of 10 years, 1881–90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios 1886 to 1892 in that

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK with the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent to West Indies.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent to West Indies.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
1·7	—	—	—	·05	6·2	—	—	—	·14
1·7	1·72	—	—	·51	·4	—	—	—	·01
—	—	—	—	—	13·5	—	—	—	·13
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
10·3	3·44	1·72	—	·45	31·2	—	·37	—	2·14
5·2	—	—	—	·26	14·3	—	—	—	·35
18·9	5·16	1·72	—	1·27	65·6	—	·37	—	2·77
583·5	—	3·44	—	12·86	914·2	7·33	·37	—	22·71
—	—	—	—	—	2·2	·37	—	—	·01
51·6	—	1·72	—	4·47	57·2	—	—	—	5·42
51·6	—	13·77	8·61	5·89	41·4	—	1·83	—	4·37
148·0	—	—	—	9·43	151·1	—	—	—	8·89
251·2	—	15·49	8·61	19·79	249·7	—	1·83	—	18·68
—	—	—	—	—	—	—	—	—	—
12·1	—	—	—	·26	3·3	—	—	—	·01
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	·7	—	—	—	·04
17·2	—	17·21	—	1·79	29·0	—	10·29	—	2·02
105·0	—	12·05	5·16	8·07	83·6	—	2·93	—	5·33
5·2	1·72	3·44	3·44	·39	8·1	4·40	2·57	—	1·06
5·2	1·72	5·16	—	·24	3·3	—	1·47	—	·16
10·3	—	—	—	·64	9·9	1·10	1·19	—	·59
3·4	—	1·72	1·72	·09	1·5	—	—	—	·11
20·7	—	1·72	1·72	2·05	29·3	—	·73	—	1·67
12·1	—	—	—	·83	3·7	—	—	—	·10
3·4	1·72	—	—	·09	19·1	1·10	1·83	—	1·14
31·0	5·16	—	—	2·17	62·0	1·83	·37	—	3·08
27·5	—	1·72	1·72	1·13	73·0	·73	—	—	2·34
46·2	—	3·44	—	3·46	65·6	—	1·10	—	6·13
—	—	—	—	—	9·9	2·93	·37	—	·86
75·7	—	—	—	6·90	83·2	—	·37	—	5·68
13·8	1·72	6·89	6·89	1·74	13·9	—	1·47	—	1·73
67·1	—	—	—	3·46	36·7	—	—	—	1·88
94·7	—	—	—	6·89	166·8	—	·37	—	7·06
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	·4	·37	—	—	·01
67·1	—	—	—	4·01	73·0	·73	·37	—	2·36
—	—	—	—	—	4·0	·37	—	—	·09
—	—	—	—	—	2·6	—	—	—	·15
—	—	—	—	—	—	—	—	—	—
1473·3	17·21	74·01	29·26	77·93	2014·3	21·27	27·87	—	87·76
1736·5	21·21	18·47	7·86	75·53	—	—	—	—	—

for the six years 1886 to 1891 will be given in the Report for 1892; those for the seven years for 1893 &c., &c.

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ABSTRACT No. X.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed at SOUTH AFRICA and ST. HELENA average Ratios for 10 Years.*

Average Strength. 3,185. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally discharged the Service.	Average Number constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	—
Sub-Group I. Other Eruptive Fevers	7	—	—	—	—	—	·46
Sub-Group I. Enteric Fever	78	17	—	17	—	—	15·38
Sub-Group I. Other Continued Fevers	219	—	—	—	—	—	12·06
Sub-Group I. Yellow Fever	—	—	—	—	—	—	—
Sub-Group I. Cholera	—	—	—	—	—	—	—
Sub-Group I. Dysentery	7	—	—	—	2	1	1·26
Sub-Group I. Other Diseases	6	—	—	—	—	—	·31
Total	317	17	—	17	2	1	29·47
Sub-Group II.—Malarial Fevers	40	—	—	—	—	—	1·47
Sub-Group III.—Septic Diseases	1	—	—	—	1	—	·63
Sub-Group IV. Syphilis, Primary	201	—	—	—	—	—	16·12
Sub-Group IV. " Secondary	141	2	1	3	5	2	12·67
Sub-Group IV. Gonorrhœa	229	—	—	—	1	1	15·64
Total	571	2	1	3	6	3	44·43
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	11	—	—	—	—	—	·22
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Sub-Group II. Alcoholism	6	—	—	—	—	—	·19
GROUP "C."							
Debility, &c.	42	—	—	—	13	5	5·76
GROUP "D."							
Rheumatism	109	—	—	—	5	3	9·34
Tubercular Diseases	16	1	—	1	7	7	4·06
Other Diseases	16	—	—	—	2	1	1·68
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	36	2	—	2	7	8	4·93
1. Nervous System Mental "	5	—	—	—	2	3	·62
2. Eye	40	—	—	—	3	1	2·91
3 & 4. Other Organs of Special Senses	31	—	—	—	2	2	2·17
5. Circulatory System	40	—	—	—	15	10	7·97
6. Respiratory "	75	—	—	—	1	1	4·75
7. Digestive "	332	—	—	—	5	1	13·97
8. Lymphatic and Glandular System	68	—	—	—	—	—	6·04
9. Urinary System	6	—	—	—	1	—	·95
10. Generative "	95	—	—	—	—	1	7·24
11. Organs of Locomotion	37	—	—	—	3	3	2·98
12. Connective Tissue	94	—	—	—	—	—	4·10
13. Skin	243	—	—	—	1	2	10·84
III.—POISONS	3	—	—	—	—	—	·03
IV.—INJURIES.							
1. General	3	4	—	4	2	1	·45
2. Local	414	2	—	2	—	—	15·89
3. In Action	—	—	—	—	—	—	—
No appreciable disease	5	—	—	—	—	—	·20
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	2,656	28	1	29	78	53	182·51
* Average of 10 years, 1881–90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for 1886 to 1892 in

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK during the Year 1891, with the Ratios per 1,000 of the Strength, and the

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
2·2	—	—	—	·14	·7	—	—	—	·04
24·5	5·34	—	—	4·82	4·8	1·14	—	—	·47
68·7	—	—	—	3·79	28·9	·06	—	—	1·30
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	·1	—	—	—	—
2·2	—	·63	·31	·40	7·5	·17	·80	·06	·76
1·9	—	—	—	·10	1·0	—	—	—	·02
99·5	5·34	1·63	·31	9·25	43·0	1·37	·80	·06	2·59
12·6	—	—	—	·46	9·0	·06	·06	—	·37
·3	—	·31	—	·20	2·3	—	—	—	·10
63·1	—	—	—	5·06	102·8	—	—	—	3·11
44·3	·94	1·57	·63	3·98	60·6	·28	3·08	2·11	5·09
71·9	—	·31	·31	4·91	96·2	—	·23	—	6·28
179·3	·94	1·88	·94	13·85	259·6	·28	3·31	2·11	19·48
—	—	—	—	—	—	—	—	—	—
3·5	—	—	—	·07	1·9	—	—	·17	·03
—	—	—	—	—	—	—	—	—	—
1·9	—	—	—	·06	4·8	—	·06	—	·12
13·2	—	4·08	1·57	1·81	16·1	—	3·65	1·48	1·66
34·2	—	1·57	·94	2·93	45·9	·11	2·11	·63	3·46
5·0	·31	2·20	2·20	1·28	2·6	·63	1·14	·91	·39
5·0	—	·63	·31	·53	4·7	·11	·51	·34	·35
11·3	·63	2·20	2·51	1·55	7·5	·57	1·37	1·20	·66
1·6	—	·63	·94	·19	1·1	·11	1·03	·97	·27
12·6	—	·94	·31	·91	18·3	—	1·31	1·25	1·40
9·7	—	·63	·63	·68	5·3	·06	·45	·51	·43
12·6	—	4·71	3·14	2·22	11·7	·28	3·88	2·28	1·45
23·5	—	·31	·31	1·49	23·0	·68	1·54	·91	1·79
104·2	—	1·57	·31	4·39	79·5	·63	1·60	1·03	3·06
21·4	—	—	—	1·90	41·4	—	·17	·17	4·02
1·9	—	·31	—	·50	4·2	·11	·45	·28	·24
29·8	—	—	·31	2·30	53·7	—	·45	·40	3·38
11·6	—	·94	·94	·94	6·7	·06	·51	·63	·50
29·5	—	—	—	1·29	26·0	—	·06	—	1·15
76·3	—	·31	·63	3·40	55·7	—	·28	·06	2·54
·9	—	—	—	·01	·1	—	—	—	—
·9	1·25	·63	·31	·14	2·0	·97	·33	·06	·12
130·0	·63	—	—	4·99	95·6	·57	1·20	·80	4·38
—	—	—	—	—	—	·11	—	·11	—
1·6	—	—	—	·06	1·8	—	—	—	·07
—	—	—	—	—	—	—	—	—	—
833·9	9·10	24·49	16·63	57·30	823·5	6·73	26·17	16·36	54·00
777·7	15·69	42·13	20·75	51·88	—	—	—	—	—

the six years 1886 to 1891 will be given in the Report for 1892; those for the seven years that for 1893, &c., &c.

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ABSTRACT No. XI.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed at MAURITIUS during the Year 1891, with

Average Strength, 580. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	1	—	—	—	—	—	·13
Other Eruptive Fevers	2	—	—	—	—	—	·25
Enteric Fever	29	9	—	9	—	—	3·19
Other Continued Fevers	—	—	—	—	—	—	—
Yellow Fever	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—
Dysentery	7	—	—	—	1	—	·74
Other Diseases	—	—	—	—	—	—	—
Total	39	9	—	9	1	—	4·31
Sub-Group II.—Malarial Fevers	208	—	—	—	3	—	7·54
Sub-Group III.—Septic Diseases	—	—	—	—	—	—	—
Sub-Group IV. Syphilis, Primary	14	—	—	—	—	—	1·49
„ Secondary	15	—	—	—	—	—	·88
Gonorrhœa	39	—	—	—	—	—	2·78
Total	68	—	—	—	—	—	5·15
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	3	—	—	—	—	—	·13
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Alcoholism	1	1	—	1	—	—	—
GROUP "C."							
Debility, &c.	7	—	—	—	—	—	·22
GROUP "D."							
Rheumatism	13	—	—	—	1	—	·75
Tubercular Diseases	1	—	1	1	—	1	·27
Other Diseases	3	—	—	—	—	—	·15
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	8	—	—	—	1	2	·27
Mental „	1	—	—	—	1	1	·02
2. Eye	4	—	—	—	—	—	·33
3 & 4. Other Organs of Special Senses	7	—	—	—	—	1	·43
5. Circulatory System	11	—	—	—	—	2	·46
6. Respiratory „	16	—	—	—	1	—	1·39
7. Digestive „	94	1	—	1	—	1	3·19
8. Lymphatic and Glandular System	33	—	—	—	—	—	3·34
9. Urinary System	1	—	—	—	—	—	·15
10. Generative „	27	—	—	—	—	—	1·70
11. Organs of Locomotion	3	—	—	—	—	—	·10
12. Connective Tissue	16	—	—	—	—	—	·51
13. Skin	44	—	—	—	—	—	2·47
III.—POISONS.	—	—	—	—	—	—	—
IV.—INJURIES.							
1. General	1	1	—	1	—	—	·04
2. Local	72	2	—	2	—	—	2·46
3. In Action	—	—	—	—	—	—	—
No appreciable disease	3	—	—	—	—	—	·04
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	684	14	1	15	8	8	35·42
* Average of 10 years, 1881-90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for 1886 to 1892 in that

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000, from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
1·7	—	—	—	·22	—	—	—	—	—
3·4	—	—	—	·43	·4	—	—	—	·04
50·0	15·52	—	—	5·50	7·1	2·21	·44	—	·79
—	—	—	—	—	3·6	1·77	—	—	·18
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
12·1	—	1·72	—	1·28	34·5	1·77	·44	—	1·91
—	—	—	—	—	1·3	—	—	—	·02
67·2	15·52	1·72	—	7·43	46·9	5·75	·89	—	2·94
358·6	—	5·17	—	13·00	584·8	2·66	16·38	—	26·76
—	—	—	—	—	3·1	·44	—	—	·11
24·1	—	—	—	2·57	47·4	—	—	—	3·79
25·9	—	—	—	1·52	30·5	—	2·66	·89	2·95
67·2	—	—	—	4·79	139·0	—	—	—	9·05
117·2	—	—	—	8·88	216·9	—	2·66	·89	15·70
—	—	—	—	—	—	—	—	—	—
5·2	—	—	—	·22	4·0	—	—	·44	·07
—	—	—	—	—	·4	—	—	—	·02
1·7	1·72	—	—	—	4·4	—	—	—	·11
12·1	—	—	—	·38	18·6	—	10·18	3·10	1·13
22·4	—	1·72	—	1·29	25·7	—	1·33	·44	1·44
1·7	1·72	—	1·72	·47	2·7	—	1·77	1·77	·28
5·2	—	—	—	·26	5·3	—	·44	—	·25
13·8	—	1·72	3·45	·47	10·2	·89	2·66	·89	·60
1·7	—	1·72	1·72	·03	3·6	·44	2·21	2·66	·61
6·9	—	—	—	·57	11·1	—	1·33	1·33	1·10
12·1	—	—	1·72	·74	8·8	—	·89	—	·50
19·0	—	—	3·45	·79	22·1	·44	5·31	3·98	1·76
27·6	—	1·72	—	2·40	19·0	—	·89	·89	1·08
162·1	1·72	—	1·72	5·50	101·8	1·77	2·66	·44	4·10
56·9	—	—	—	5·76	56·2	—	—	·44	6·51
1·7	—	—	—	·26	6·2	—	2·21	·89	·55
46·6	—	—	—	2·93	75·7	—	·44	·89	5·07
5·2	—	—	—	·17	4·4	—	—	—	·25
27·6	—	—	—	·88	21·2	—	—	—	·94
75·9	—	—	—	4·26	51·8	—	—	—	2·51
—	—	—	—	—	—	—	—	—	—
1·7	1·72	—	—	·07	1·8	1·33	·44	—	·03
124·1	3·45	—	—	4·24	97·4	·89	—	—	4·34
—	—	—	—	—	—	—	—	—	—
5·2	—	—	—	·07	2·7	—	—	—	·08
—	—	—	—	—	—	—	—	—	—
1179·4	25·86	13·79	13·79	61·07	1406·8	14·61	52·68	19·04	78·92
1807·0	15·33	48·17	16·30	84·43	—	—	—	—	—

the six years 1886 to 1891 will be given in the Report for 1892; those for the seven years for 1893, &c., &c.

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ABSTRACT No. XII.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS, the Troops stationed at CEYLON during the Year 1891, with the Ratios

Average Strength, 1,251. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	·03
Other Eruptive Fevers	—	—	—	—	—	—	—
Enteric Fever	13	2	—	2	—	—	1·70
Other Continued Fevers	61	—	—	—	—	—	2·28
Yellow Fever	—	—	—	—	—	—	—
Cholera	1	1	—	1	—	—	·01
Dysentery	37	—	—	—	2	—	3·04
Other Diseases	32	—	—	—	—	—	·56
Total	144	3	—	3	2	—	7·62
Sub-Group II.—Malarial Fevers	100	2	—	2	—	—	3·66
Sub-Group III.—Septic Diseases	1	—	—	—	—	—	·02
Sub-Group IV. Syphilis, Primary	114	—	—	—	—	—	8·71
„ Secondary	101	—	—	—	7	4	8·58
Gonorrhœa	119	—	—	—	1	1	6·78
Total	334	—	—	—	8	5	24·07
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	1	—	—	—	—	—	·02
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Alcoholism	3	—	—	—	—	—	·06
GROUP "C."							
Debility, &c.	23	—	—	—	6	2	1·15
GROUP "D."							
Rheumatism	28	—	—	—	—	—	1·70
Tubercular Diseases	8	1	—	1	8	8	·95
Other Diseases	5	—	—	—	2	—	·29
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	6	2	—	2	2	2	·45
Mental „	1	—	—	—	4	4	·91
2. Eye	12	—	—	—	3	3	·77
3 & 4. Other Organs of Special Senses	8	—	—	—	—	—	·31
5. Circulatory System	8	—	—	—	3	2	·85
6. Respiratory „	54	2	—	2	1	1	2·53
7. Digestive „	111	1	1	2	2	—	3·98
8. Lymphatic and Glandular System	37	—	—	—	1	—	5·07
9. Urinary System	—	—	—	—	—	—	—
10. Generative „	53	—	—	—	1	—	5·42
11. Organs of Locomotion	9	—	—	—	—	—	·50
12. Connective Tissue	16	—	—	—	—	—	·59
13. Skin	88	—	—	—	—	—	2·63
III.—POISONS	—	—	—	—	—	—	—
IV.—INJURIES.							
1. General	5	3	—	3	1	—	·51
2. Local	87	—	—	—	—	1	3·14
3. In Action	—	—	—	—	—	—	—
No appreciable disease	5	—	—	—	—	—	·08
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	1,147	14	1	15	44	28	67·29
* Average of 10 years 1881-90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios seven years 1886 to 1892

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK among per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	·02	—	—	—	—	—
—	—	—	—	—	·6	—	—	—	·02
10·4	1·60	—	—	1·36	11·2	5·25	—	—	1·09
48·7	—	—	—	1·82	85·7	—	—	—	2·75
—	—	—	—	—	—	—	—	—	—
·8	·80	—	—	·01	—	—	—	—	—
29·6	—	1·60	—	2·43	20·8	·75	1·69	·19	1·74
25·6	—	—	—	·45	·2	—	—	—	·01
115·1	2·40	1·60	—	6·09	118·5	6·00	1·69	·19	5·61
79·9	1·60	—	—	2·93	18·0	—	·56	—	·61
·8	—	—	—	·02	·9	—	—	—	·01
91·1	—	—	—	6·96	55·5	—	·19	—	4·28
80·7	—	5·59	3·20	6·86	50·8	—	·94	1·31	3·81
95·1	—	·80	·80	5·42	141·0	—	—	—	7·49
266·9	—	6·39	4 00	19·24	247·3	—	1·13	1·31	15·58
—	—	—	—	—	—	—	—	—	—
·8	—	—	—	·02	1·3	—	—	—	·01
—	—	—	—	—	—	—	—	—	—
2·4	—	—	—	·05	5·3	·19	—	—	·16
18·4	—	4·79	1·60	·92	18·4	—	3·19	1·69	1·18
22·4	—	—	—	1·36	28·9	—	—	—	1·58
6·4	·80	6·39	6·39	·76	4·1	1·50	1·69	1·31	·95
4·0	—	1·60	—	·23	15·0	—	·75	·56	1·09
4·8	1·60	1·60	1·60	·36	12·6	·56	2·06	1·50	·81
·8	—	3·20	3·20	·73	2·4	—	1·69	1·69	·79
9·6	—	2·40	2·40	·61	11·8	—	·37	·56	·61
6·4	—	—	—	·25	16·7	—	·37	·37	·79
6·4	—	2·40	1·60	·68	9·2	1·13	1·50	·56	·99
43·2	1·60	·80	·80	2·02	20·4	·56	1·50	·37	1·72
88·7	1·60	1·60	—	3·18	102·2	1·87	1·13	·37	3·99
29·6	—	·80	—	4·05	81·8	—	·19	—	8·12
—	—	—	—	—	5·1	—	·56	·37	·44
42·4	—	·80	—	4·33	148·0	—	·19	—	8·96
7·2	—	—	—	·40	8·1	—	1·13	·94	·73
12·8	—	—	—	·47	22·1	—	—	—	·90
70·3	—	—	—	2·10	70·9	—	—	—	2·95
—	—	—	—	—	—	—	—	—	—
4·0	2·40	·80	—	·41	2·4	1·50	—	—	·67
69·5	—	—	·80	·51	110·4	·56	·56	·56	4·25
—	—	—	—	—	—	—	—	—	—
4·0	—	—	—	·06	2·6	—	—	—	·04
—	—	—	—	—	—	—	—	—	—
916·8	11·99	35·17	22·38	53·78	1084·4	13·87	20·25	12·57	62·94
1157·8	12·83	31·24	15·02	63·38	—	—	—	—	—

for the six years 1886 to 1891 will be given in the Report for 1892; those for the in that for 1893, &c., &c.

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ABSTRACT No. XIII.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS among the TROOPS stationed in CHINA during the Year 1891, with the

Average Strength, 1,334. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	3	—	—	—	—	—	·24
Other Eruptive Fevers	—	—	—	—	—	—	—
Enteric Fever	—	—	—	—	—	—	—
Other Continued Fevers	—	—	—	—	—	—	—
Yellow Fever	—	—	—	—	—	—	—
Cholera	2	2	—	2	—	—	·01
Dysentery	14	—	—	—	—	—	·38
Other Diseases	4	—	—	—	—	—	·14
Total	23	2	—	2	—	—	·77
Sub-Group II.—Malarial Fevers	638	1	—	1	7	3	14·02
Sub-Group III.—Septic Diseases	—	—	—	—	—	—	—
Sub-Group IV. Syphilis, Primary	74	—	—	—	—	—	6·88
„ Secondary	77	—	—	—	3	—	4·37
Gonorrhœa	137	—	—	—	—	—	9·48
Total	288	—	—	—	3	—	20·73
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	—	—	—	—	—	—	—
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Alcoholism	3	—	—	—	—	—	·15
GROUP "C."							
Debility, &c.	9	—	—	—	—	2	·31
GROUP "D."							
Rheumatism	35	—	—	—	1	—	1·31
Tubercular Diseases	3	—	2	2	4	—	·90
Other Diseases	5	1	—	1	—	—	·16
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	6	—	—	—	—	—	·24
Mental „	1	—	—	—	1	1	·14
2. Eye	5	—	—	—	—	—	·50
3 & 4. Other Organs of Special Senses	6	—	—	—	1	1	·17
5. Circulatory System	23	—	—	—	5	5	1·85
6. Respiratory „	76	2	—	2	3	—	3·07
7. Digestive „	105	1	—	1	2	—	3·85
8. Lymphatic and Glandular System	35	—	—	—	—	—	3·66
9. Urinary System	2	—	—	—	—	—	·27
10. Generative „	148	—	—	—	—	—	11·05
11. Organs of Locomotion	9	—	—	—	1	1	1·01
12. Connective Tissue	46	—	—	—	—	—	1·63
13. Skin	58	—	—	—	—	—	2·02
III.—POISONS	—	—	—	—	—	—	—
IV.—INJURIES.							
1. General	—	1	—	1	—	—	—
2. Local	132	4	—	4	1	1	4·36
3. In Action	—	—	—	—	—	—	—
No appreciable disease	—	—	—	—	—	—	—
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	1,651	12	2	14	29	14	73·17
* Average of 10 years, 1881-90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for the 1886 to 1892 in

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into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK Ratios per 1,000 of the Strength, and the Average Ratios for 10 years.*

Ratio per 1,000.					†Average Ratio per 1,000 from 1886 to 1890.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
2·2	—	—	—	·18	1·2	—	—	—	·11
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1·4	·31	·16	—	·19
—	—	—	—	—	15·1	—	—	—	·39
—	—	—	—	—	—	—	—	—	—
1·5	1·50	—	—	·01	·2	·16	—	—	—
10·5	—	—	—	·28	17·1	·63	·94	—	·95
3·0	—	—	—	·11	·3	—	—	—	·01
17·2	1·50	—	—	·58	35·3	1·10	1·10	—	1·65
478·3	·75	5·25	2·25	10·51	430·4	2·20	3·14	·16	10·40
—	—	—	—	—	·2	—	—	—	·01
55·5	—	—	—	5·16	19·9	—	—	—	2·02
57·7	—	2·25	—	3·27	45·8	·16	1·41	·78	3·04
102·7	—	—	—	7·11	110·1	—	—	—	6·88
[215·9	—	2·25	—	15·54	173·8	·16	1·41	·78	11·94
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1·1	—	—	—	·01
—	—	—	—	—	—	·16	—	—	—
2·2	—	—	—	·11	4·4	·16	—	—	·24
6·7	—	—	1·50	·23	21·0	—	2·20	1·57	·93
26·2	—	·75	—	·98	16·2	—	·31	·16	·64
2·2	1·50	3·00	—	·67	4·9	·63	2·52	1·10	·75
3·8	·75	—	—	·12	5·8	·16	·16	·31	·55
4·5	—	—	—	·18	6·3	·31	·63	·47	·45
·8	—	·75	·75	·11	1·1	·16	·47	·63	·29
3·8	—	—	—	·38	9·6	—	·63	·31	·51
4·5	—	·75	·75	·13	13·5	—	·31	·47	·53
17·2	—	3·75	3·75	1·39	11·1	·78	2·20	1·88	·64
57·0	1·50	2·25	—	2·30	23·1	·16	1·10	·94	1·39
78·7	1·75	1·50	—	2·89	99·7	·63	2·36	·78	3·92
26·2	—	—	—	2·74	15·9	—	·31	·16	1·30
1·5	—	—	—	·20	4·4	—	·31	·16	·39
107·2	—	—	—	8·28	111·2	—	—	—	7·81
16·7	—	·75	·75	·76	10·4	—	·94	·78	·68
34·5	—	—	—	1·22	22·8	—	·31	·16	1·19
43·5	—	—	—	1·51	48·2	—	·31	—	2·01
—	—	—	—	—	·5	—	—	—	—
—	·75	—	—	—	1·4	1·73	—	—	·10
99·0	3·00	·75	·75	3·27	80·4	·94	1·10	1·10	3·63
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	·6	—	—	—	·04
—	—	—	—	—	—	—	—	—	—
1237·6	10·49	21·74	10·49	54·10	1153·3	9·27	21·82	11·93	52·00
1066·5	9·61	35·49	—	52·26	—	—	—	—	—

[1] 5 years 1886 to 1891 will be given in the Report for 1892; those for the seven years at for 1893, &c. &c.
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ABSTRACT No. XIV.—TABLE showing the AVERAGE STRENGTH, ADMIS- among the TROOPS stationed in the STRAITS SETTLEMENTS during Ratios for 10 years.*

Average Strength, 1,270. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	—	—	—	—	—	—	—
Other Eruptive Fevers	—	—	—	—	—	—	—
Enteric Fever	5	2	—	2	—	—	·60
Other Continued Fevers	12	—	—	—	—	—	·70
Yellow Fever	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—
Dysentery	14	—	—	—	1	1	1·38
Other Diseases	—	—	—	—	—	—	—
Total	31	2	—	2	1	1	2·68
Sub-Group II.—Malarial Fevers	182	—	—	—	1	—	6·74
Sub-Group III.—Septic Diseases	—	—	—	—	—	—	—
Sub-Group IV. Syphilis, Primary	124	—	—	—	—	—	12·38
" Secondary	208	—	—	—	15	4	26·23
Gonorrhœa	187	—	—	—	1	—	15·93
Total	519	—	—	—	16	4	54·54
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	—	—	—	—	—	—	—
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Alcoholism	10	—	—	—	—	—	·49
GROUP "C."							
Debility, &c.	22	—	—	—	5	2	2·81
GROUP "D."							
Rheumatism	16	—	—	—	1	1	1·81
Tubercular Diseases	2	—	1	1	3	2	·98
Other Diseases	18	1	—	1	—	—	1·13
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	9	—	—	—	—	1	·39
Mental "	4	—	—	—	2	2	·56
2. Eye	15	—	—	—	1	—	·69
3 & 4. Other Organs of Special Senses	21	—	—	—	1	1	·80
5. Circulatory System	3	—	—	—	5	6	·82
6. Respiratory "	24	1	—	1	4	—	2·43
7. Digestive "	108	—	—	—	—	—	5·63
8. Lymphatic and Glandular System	42	—	—	—	1	—	6·14
9. Urinary System	—	—	—	—	1	2	·17
10. Generative "	226	—	—	—	—	1	18·86
11. Organs of Locomotion	5	—	—	—	1	2	·76
12. Connective Tissue	39	—	—	—	1	—	1·98
13. Skin	66	—	—	—	—	—	3·24
III.—POISONS	—	—	—	—	—	—	—
IV.—INJURIES.							
1. General	1	1	—	1	—	—	·09
2. Local	97	—	—	—	1	1	4·93
3. In Action	—	—	—	—	—	—	—
No appreciable disease	3	—	—	—	—	—	·06
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	1,463	6	1	6	45	26	118·73
* Average of 10 years, 1881-90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for the 1886 to 1892 in

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SIONS into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY SICK the Year 1891, with the Ratios per 1,000 of the Strength, and the Average

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	·2	—	—	—	·02
3·9	1·57	—	—	·47	2·3	·71	—	—	·38
9·4	—	—	—	·55	72·3	·18	—	—	2·38
—	—	—	—	—	—	·18	—	—	—
—	—	—	—	—	·2	—	—	—	—
11·0	—	·79	·79	1·09	8·1	—	1·07	—	1·10
—	—	—	—	—	·3	—	—	—	·01
24·4	1·57	·79	·79	2·11	83·4	1·07	1·07	—	3·89
143·3	—	·72	—	5·31	151·9	—	—	—	4·36
—	—	—	—	—	—	—	—	—	—
97·6	—	—	—	9·75	68·7	—	—	—	6·38
163·8	—	11·81	3·15	20·65	71·9	—	1·79	·36	6·98
147·2	—	·79	—	12·54	162·7	—	·18	—	11·65
408·6	—	12·60	3·15	42·94	303·3	—	1·97	·36	25·01
—	—	—	—	—	·2	·18	—	—	—
—	—	—	—	—	4·8	—	—	—	·10
—	—	—	—	—	—	—	—	—	—
7·9	—	—	—	·39	8·4	·54	—	—	·31
17·8	—	3·94	1·57	2·21	18·6	—	1·97	2·15	2·25
12·6	—	·79	·79	1·43	14·0	—	·36	·18	1·01
1·6	·79	2·36	1·57	·77	1·8	·54	1·25	·71	·59
14·2	·79	—	—	·89	10·2	—	·18	—	·65
7·1	—	—	·79	·31	3·6	·71	—	·18	·18
3·1	—	1·57	1·57	·44	·9	·18	·89	·71	·28
11·8	—	·79	—	·54	29·7	—	·71	·36	1·41
16·5	—	·79	·79	·63	17·2	—	—	—	·70
2·4	—	3·94	4·72	·65	6·4	·18	1·25	1·43	·99
18·9	·79	3·15	—	1·91	24·7	1·25	1·61	·71	1·70
85·0	—	—	—	4·43	74·6	·36	1·07	·54	3·30
33·1	—	·79	—	4·83	47·6	—	—	·18	5·33
—	—	·79	1·57	·13	3·6	·18	·36	·18	·61
177·9	—	—	·79	14·85	135·5	—	1·07	1·07	8·69
3·9	—	·79	1·57	·60	9·8	—	·54	·54	·59
30·7	—	·79	—	1·56	35·1	—	—	—	1·33
52·0	—	—	—	2·55	94·8	—	—	—	3·95
—	—	—	—	—	·2	—	—	—	—
·8	·79	—	—	·07	4·3	1·79	—	—	·30
76·4	—	·79	·79	3·88	112·9	·36	·71	·54	4·53
—	—	—	—	—	—	—	—	—	—
2·4	—	—	—	·05	2·9	—	—	—	·10
—	—	—	—	—	—	—	—	—	—
1151·9	4·72	35·43	20·47	93·48	1200·4	7·34	15·03	9·84	72·16
1223·3	6·98	22·70	—	62·13	—	—	—	—	—

six years 1886 to 1891 will be given in the Report for 1892; those for the seven years that for 1893, &c., &c.

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ABSTRACT No. XV.—TABLE showing the AVERAGE STRENGTH, ADMISSIONS into HOSPITAL, and DEATHS from DISEASES, SICK, among the Troops stationed in BENGAL during the Year 1891, with

Average Strength 40,198. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. No. sent Home.	Invalids. No. finally discharged the Service.
I.—GENERAL DISEASES.						
GROUP "A."						
Sub-Group I. Small-pox	11	1	—	1	—	—
Other Eruptive Fevers	64	—	—	—	—	—
Enteric Fever	998	268	—	268	19	—
Other Continued Fevers	1,635	—	—	—	—	—
Yellow Fever	—	—	—	—	—	—
Cholera	169	113	—	113	—	—
Dysentery	930	17	1	18	37	17
Other Diseases	253	1	—	1	—	—
Total	4,060	400	1	401	56	17
Sub-Group II.—Malarial Fevers	15,304	23	—	23	93	25
Sub-Group III.—Septic Diseases	52	5	—	5	—	—
Sub-Group IV. Syphilis, Primary	3,458	—	—	—	—	—
" Secondary	2,354	2	1	3	104	49
Gonorrhœa	6,400	—	—	—	1	—
Total	12,212	2	1	3	105	49
Sub-Group V.—Hydrophobia, &c.	7	3	—	3	—	—
GROUP "B."						
Sub-Group I.—Parasitic Diseases	126	—	—	—	—	—
Sub-Group II. Scurvy	5	—	—	—	—	—
Alcoholism	341	1	—	1	—	—
GROUP "C."						
Debility, &c.	831	—	—	—	138	75
GROUP "D."						
Rheumatism	1,256	1	1	2	42	17
Tubercular Diseases	114	16	8	24	64	59
Other Diseases	389	4	—	4	21	7
II.—LOCAL DISEASES.						
Diseases of the—						
1. Nervous System Nervous Diseases	327	19	—	19	42	25
Mental "	66	—	—	—	42	53
2. Eye	551	—	—	—	26	20
3 & 4. Other Organs of Special Senses	635	1	—	1	36	25
5. Circulatory System	516	15	—	15	101	123
6. Respiratory "	1,523	34	2	36	21	14
7. Digestive "	5,312	58	3	61	75	23
8. Lymphatic and Glandular System	1,325	1	—	1	23	6
9. Urinary System	84	7	—	7	15	6
10. Generative "	3,295	—	—	—	5	8
11. Organs of Locomotion	342	—	—	—	41	29
12. Connective Tissue	918	1	—	1	7	—
13. Skin	2,756	—	—	—	8	—
III.—POISONS	26	3	—	3	—	—
IV.—INJURIES.						
1. General	182	60	—	60	5	1
2. Local	4,068	27	1	28	42	32
3. In Action	—	—	—	—	1	1
No appreciable disease	85	—	—	—	—	—
Cause unknown (refers to deaths only)	—	—	—	—	—	—
General Total	56,708	681	17	698	1,009	615
* Average of 10 years, 1889-90	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for the 1886 to 1892 in that for

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SIONS into HOSPITAL, DEATHS, NUMBERS INVALIDED, and CONSTANTLY the Ratios per 1,000 of the Strength, and the average Ratios for 10 Years.*

Average Number constantly Sick.	Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged	Constantly Sick.
1·25	·8	·02	—	—	·03	1·1	·11	—	—	·12
2·00	1·6	—	—	—	·05	2·6	·01	—	—	·06
159·36	24·8	6·67	·47	—	3·94	20·1	5·38	·16	—	2·73
67·91	40·7	—	—	—	1·69	77·4	·05	·01	—	2·70
—	—	—	—	—	—	—	—	—	—	—
4·32	4·2	2·81	—	—	·11	2·0	1·37	—	—	·06
63·09	23·1	·45	·93	·43	1·57	26·1	·67	·80	·11	1·66
9·13	6·3	·02	—	—	·23	7·1	·01	—	—	·19
306·06	101·0	9·98	1·39	·42	7·61	136·4	7·60	·97	·11	7·52
495·97	380·7	·57	2·31	·62	12·34	366·8	·55	1·22	·16	10·93
2·57	1·3	·12	—	—	·06	1·9	·10	—	·01	·13
305·53	86·0	—	—	—	7·60	99·0	—	·01	·01	7·72
244·00	58·6	·07	2·59	1·22	6·07	40·8	·09	1·27	·53	3·78
461·27	159·2	—	·02	—	11·47	173·6	—	·06	—	12·02
1010·80	303·8	·07	2·61	1·22	25·14	313·4	·09	1·34	·54	23·52
·48	·2	·07	—	—	·01	—	·03	—	—	—
2·71	3·2	—	—	—	·07	3·6	·01	—	—	·11
·32	·1	—	—	—	·01	1·3	·01	·01	—	·06
9·89	8·5	·02	—	—	·25	13·2	·08	·01	·01	·41
64·15	20·7	—	3·43	1·87	1·60	22·1	·03	2·87	1·68	1·45
88·70	31·3	·05	1·04	·42	2·21	31·8	·07	·83	·32	2·05
28·77	2·8	·60	1·59	1·47	·72	3·5	·89	1·49	1·08	·74
25·01	9·7	·10	·52	·17	·62	11·4	·15	·44	·15	·72
23·08	8·1	·47	1·04	·62	·57	9·5	·35	1·09	·82	·65
19·95	1·6	—	1·04	1·32	·50	1·5	—	1·11	1·18	·61
34·97	13·7	—	·65	·50	·87	14·2	—	·55	·58	·84
33·60	15·8	·02	·90	·62	·84	14·3	·01	·81	·62	·68
58·68	12·8	·37	2·51	3·06	1·46	12·3	·36	3·14	2·17	1·19
86·35	37·9	·90	·53	·35	2·15	39·3	1·10	·74	·39	2·33
231·22	132·1	1·52	1·87	·57	5·75	145·5	1·78	1·98	·65	5·76
147·54	33·0	·02	·57	·15	3·67	26·4	·02	·37	·15	2·52
8·52	2·1	·17	·37	·15	·21	2·1	·14	·24	·16	·20
227·50	82·0	—	·12	·20	5·66	101·7	·02	·27	·26	6·55
26·21	8·5	—	1·02	·72	·65	7·0	·04	·67	·59	·55
38·22	22·8	·02	·17	—	·95	21·3	·01	·10	·04	·97
107·92	68·6	—	·20	—	2·68	68·5	—	·18	·06	2·77
·48	·6	·07	—	—	·01	·3	·11	—	—	·01
10·03	4·5	1·49	·12	·02	·25	3·4	1·41	·12	·01	·17
174·14	101·2	·70	1·04	·80	4·33	114·0	·89	·92	·64	4·84
·03	--	—	·02	·02	—	—	·01	·01	·02	—
3·15	2·1	—	—	—	·08	2·3	—	—	—	·11
—	—	—	—	—	—	—	—	—	—	·02
3267·02	1410·7	17·36	25·10	15·30	81·27	1489·0	15·86	21·48	12·40	78·40
—	1535·5	15·16	25·96	13·12	74·46	—	—	—	—	—

six years, 1886 to 1891 will be given in the Report for 1892; those for the seven years 1893, &c., &c.

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ABSTRACT No. XVI.—TABLE, taken from the REPORT of the PRINCIPAL CLASSES of DISEASES in each of the MILITARY DISTRICTS in the BENGAL

Military Districts.	Presidency.		Allahabad.		Oudh.		Rohilkhand.		Narbudda.	
Average Strength.	2,662		2,446		4,272		2,957		1,163	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
I.—GENERAL DISEASES.										
GROUP "A."										
Sub-Group I. Small-pox	—	—	—	—	2	—	1	1	—	—
Other Eruptive Fevers	2	—	23	—	24	—	9	—	—	—
Enteric Fever	25	12	41	10	169	34	86	20	15	11
Other Continued Fevers	26	—	85	—	146	—	124	—	31	—
Yellow Fever	—	—	—	—	—	—	—	—	—	—
Cholera	1	1	57	35	39	30	2	1	2	1
Dysentery	134	3	79	—	187	6	73	1	42	2
Other diseases	3	—	—	—	1	—	—	—	1	—
Total	191	16	285	45	518	70	295	23	91	14
Sub-Group II.—Malarial Fevers	1,398	2	998	—	1,004	1	338	—	658	—
Sub-Group III.—Septic Diseases	3	1	2	—	2	1	4	1	1	—
Sub-Group IV. Syphilis, Primary	425	—	380	—	429	—	701	—	44	—
" Secondary	250	—	232	—	215	—	229	1	104	—
Gonorrhœa	417	—	637	—	811	—	678	—	267	—
Total	1,092	—	1,249	—	1,455	—	1,608	1	415	—
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	1	1	1	1	—	—
GROUP "B."										
Sub-Group I.—Parasitic Diseases	16	—	3	—	12	—	1	—	2	—
Sub-Group II. Scurvy	—	—	—	—	—	—	—	—	—	—
Alcoholism	20	—	11	—	23	—	10	—	5	—
GROUP "C."										
Debility, &c.	124	—	49	—	101	—	55	—	20	—
GROUP "D."										
Rheumatism	147	—	51	—	167	—	109	—	24	—
Tubercular Diseases	5	—	10	2	13	3	6	2	3	—
Other diseases	21	—	21	—	42	—	30	—	5	—
II.—LOCAL DISEASES.										
Diseases of the—										
1. Nervous System Nervous Diseases	29	4	24	2	64	3	20	—	10	3
Mental "	7	—	10	—	6	—	12	—	4	—
2. Eye	40	—	24	—	119	—	39	—	15	—
3 & 4. Other Organs of Special Senses	70	—	66	—	128	—	45	—	16	—
5. Circulatory System	71	—	24	1	71	1	40	2	11	—
6. Respiratory "	173	3	61	2	140	2	57	1	15	—
7. Digestive "	456	10	319	3	671	4	411	5	118	4
8. Lymphatic and Glandular System	123	—	130	1	178	—	153	—	71	—
9. Urinary System	5	—	5	—	4	—	6	—	6	1
10. Generative "	103	—	332	—	249	—	199	—	241	—
11. Organs of Locomotion	26	—	21	—	28	—	29	—	4	—
12. Connective Tissue	78	—	66	—	145	1	57	—	35	—
13. Skin	184	—	237	—	531	—	161	—	79	—
III.—POISONS.	2	—	1	—	6	2	1	1	3	—
IV.—INJURIES.										
1. General	6	3	30	8	23	6	14	5	3	1
2. Local	238	3	218	2	528	3	262	3	114	—
3. In Action	—	—	—	—	—	—	—	—	—	—
No appreciable disease	2	—	6	—	9	—	5	—	2	—
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—	—	—	—
General Total	4,630	42	4,253	66	6,238	96	3,968	45	1,971	23

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MEDICAL OFFICER, showing the PREVALENCE and MORTALITY of the DIFFERENT COMMAND, with the ratios per 1,000 of Strength during the year 1891.

Bundelkhand.		Meerut.		Sirhind.		Lahore.		Rawal Pindi.		Peshawar.		Quetta.		Marching.		Total.	
2,384		4,117		3,730		4,757		5,446		2,421		2,173		1,670		40,198	
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
4	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	11	1
—	—	3	—	—	—	2	—	1	—	—	—	—	—	—	—	64	—
51	6	123	38	59	18	78	35	210	51	91	29	21	4	29	—	998	268
20	—	380	—	106	—	172	—	299	—	3	—	171	—	72	—	1,635	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	9	7	5	4	5	3	3	2	20	13	24	14	2	2	169	113
40	1	66	2	61	—	93	1	97	1	28	—	36	—	44	—	930	17
3	—	15	—	16	—	84	—	83	1	12	—	35	—	—	—	253	1
118	7	600	47	247	22	434	39	693	55	154	42	287	18	147	2	4,060	400
1,333	2	1,233	1	637	1	2,650	6	2,091	9	903	—	1,623	—	343	1	15,304	23
2	—	8	1	1	—	7	—	15	1	5	—	2	—	—	—	52	5
223	—	106	—	199	—	292	—	499	—	54	—	43	—	64	—	3,458	—
214	—	165	—	192	—	235	—	365	—	62	1	69	—	22	—	2,354	2
402	—	619	—	508	—	816	—	709	—	195	—	146	—	195	—	6,400	—
838	—	890	—	899	—	1,343	—	1,573	—	311	1	258	—	281	—	12,212	2
—	—	—	—	—	—	5	1	—	—	—	—	—	—	—	—	7	3
8	—	6	—	3	—	22	—	35	—	4	—	14	—	—	—	126	—
1	—	2	—	—	—	—	—	1	—	—	—	1	—	—	—	5	—
14	—	12	1	22	—	8	—	60	—	9	—	147	—	—	—	341	1
44	—	90	—	47	—	168	—	57	—	24	—	19	—	33	—	831	—
54	—	130	—	91	—	140	—	243	1	35	—	36	—	29	—	1,256	1
14	2	6	—	15	4	15	1	13	2	7	—	7	—	—	—	114	16
17	—	51	—	44	3	58	—	78	—	8	—	9	1	5	—	389	4
23	—	17	1	24	2	47	1	38	1	9	—	18	2	4	—	327	19
4	—	4	—	1	—	3	—	7	—	7	—	1	—	—	—	66	—
30	—	67	—	50	—	44	—	72	—	29	—	11	—	11	—	551	—
47	—	49	—	14	—	55	—	94	1	26	—	14	—	11	—	635	1
17	2	84	—	42	1	68	2	52	2	20	2	8	1	8	1	516	15
74	1	111	7	103	3	216	4	259	6	81	—	197	3	36	2	1,523	34
282	4	591	9	336	6	733	2	831	5	154	1	327	4	83	1	5,312	58
44	—	148	—	129	—	163	—	103	—	33	—	18	—	32	—	1,325	1
7	1	9	1	12	1	13	1	9	2	1	—	5	—	2	—	84	7
164	—	505	—	259	—	336	—	435	—	192	—	132	—	148	—	3,295	—
4	—	50	—	39	—	36	—	54	—	13	—	21	—	17	—	342	—
89	—	69	—	54	—	102	—	123	—	44	—	29	—	27	—	918	1
246	—	234	—	166	—	308	—	398	—	88	—	85	—	39	—	2,756	—
1	—	1	—	—	—	7	—	3	—	—	—	1	—	—	—	26	3
16	4	11	3	7	4	36	10	23	3	13	5	—	—	—	3	182	60
273	1	499	5	293	—	370	6	760	1	213	1	231	1	69	1	4,068	27
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	10	—	5	—	16	—	11	—	6	—	3	—	4	—	85	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3,775	24	5,487	76	3,540	47	7,403	73	8,131	94	2,479	52	3,504	30	1,329	11	56,708	681

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Ratio per 1,000

Military Districts.	Presidency.		Allahabad.		Oudh.		Rohilkhand.		Narbudda.		Bundelkhand.	
Average Strength.	2,662		2,446		4,272		2,957		1,163		2,384	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
I.—GENERAL DISEASES.												
GROUP "A."												
Sub-Group I. Small-pox	—	—	—	—	·5	—	·3	·34	—	—	1·7	—
Other Eruptive Fevers	·8	—	9·4	—	5·6	—	3·0	—	—	—	—	—
Enteric Fever	9·4	4·51	16·8	4·09	39·6	7·96	29·1	6·76	12·9	9·46	21·4	2·52
Other Continued Fevers	9·8	—	34·8	—	34·2	—	41·9	—	26·7	—	8·4	—
Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—
Cholera	·4	·38	23·3	14·31	9·1	7·02	·7	·34	1·7	·86	—	—
Dysentery	50·3	1·13	32·3	—	32·1	1·40	24·7	·34	66·1	1·72	16·8	·42
Other Diseases	1·1	—	—	—	·2	—	—	—	·9	—	1·3	—
Total	71·8	6·01	116·5	18·40	121·3	16·39	99·8	7·78	78·2	12·04	49·5	2·94
Sub-Group II.—Malarial Fevers	525·2	·75	403·0	—	235·0	·23	114·3	—	565·8	—	561·2	·84
Sub-Group III.—Septic Diseases	1·1	·38	·8	—	·5	·23	1·4	·34	·9	—	·8	—
Sub-Group IV. Syphilis, Primary	159·7	—	155·4	—	100·4	—	237·1	—	37·8	—	93·1	—
" Secondary	93·9	—	94·8	—	50·3	—	77·4	·34	89·4	—	89·8	—
Gonorrhœa	156·6	—	260·4	—	189·8	—	229·3	—	229·6	—	168·6	—
Total	410·2	—	510·6	—	340·6	—	543·8	·34	356·8	—	351·5	—
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	·2	·23	·3	·34	—	—	—	—
GROUP "B."												
Sub-Group I.—Parasitic Diseases	6·0	—	1·2	—	2·8	—	·3	—	1·7	—	3·4	—
Sub-Group II. Scurvy	—	—	—	—	—	—	—	—	—	—	·4	—
Alcoholism	7·5	—	4·5	—	5·4	—	3·4	—	4·3	—	5·9	—
GROUP "C."												
Debility, &c.	46·6	—	20·0	—	23·6	—	18·6	—	17·2	—	18·5	—
GROUP "D."												
Rheumatism	55·2	—	20·9	—	39·1	—	36·9	—	20·6	—	22·7	—
Tubercular Diseases	1·9	—	4·1	·82	3·0	·70	2·0	1·68	2·6	—	5·9	·84
Other Diseases	7·9	—	8·6	—	9·8	—	10·1	—	4·3	—	7·1	—
II.—LOCAL DISEASES.												
Diseases of the—												
1. Nervous System (Nervous Diseases)	10·9	1·50	9·8	·82	15·0	·70	6·8	—	8·6	2·58	9·6	—
(Mental ")	2·6	—	4·1	—	1·4	—	4·1	—	3·4	—	1·7	—
2. Eye	15·0	—	9·8	—	27·9	—	13·2	—	12·9	—	12·6	—
3 & 4. Other Organs of Special Senses	26·3	—	27·0	—	30·0	—	15·2	—	13·8	—	19·7	—
5. Circulatory System	26·7	—	9·8	·41	16·6	·23	13·5	·68	9·5	—	7·1	·84
6. Respiratory "	65·0	1·13	24·9	·82	32·8	·47	19·3	·34	12·9	—	31·0	·42
7. Digestive "	171·3	3·76	130·4	1·23	157·1	·94	139·0	1·69	101·5	3·44	118·3	1·68
8. Lymphatic and Glandular System	46·2	—	53·1	·41	41·7	—	51·7	—	61·0	—	18·5	—
9. Urinary System	1·9	—	2·0	—	·9	—	2·0	—	5·2	·86	2·9	·42
10. Generative "	38·7	—	135·7	—	58·3	—	67·3	—	207·2	—	68·8	—
11. Organs of Locomotion	9·8	—	8·6	—	6·6	—	9·8	—	3·4	—	1·7	—
12. Connective Tissue	29·3	—	27·0	—	33·9	·23	19·3	—	30·1	—	37·3	—
13. Skin	69·1	—	96·9	—	124·3	—	54·4	—	67·9	—	103·2	—
III.—POISONS	·8	—	·4	—	1·4	·47	·3	·34	2·6	—	·4	—
IV.—INJURIES.												
1. General	2·3	1·13	12·3	3·27	5·4	1·40	4·7	1·69	2·6	·86	6·7	1·68
2. Local	89·4	1·13	89·1	·82	123·6	·70	88·6	1·01	98·0	—	114·5	·42
3. In Action	—	—	—	—	—	—	—	—	—	—	—	—
No appreciable disease	·8	—	2·5	—	2·1	—	1·7	—	1·7	—	2·5	—
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—	—	—	—	—	—
General Total	1739·8	15·78	1738·8	26·98	1460·2	22·94	1341·9	15·22	1694·8	19·78	1583·5	10·07

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of Mean Strength.

Meerut.		Sirhind.		Lahore.		Rawal Pindi.		Peshawar.		Quetta.		Marching.		Total.	
4,117		3,730		4,757		5,446		2,421		2,173		1,670		40,198	
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
1·0	—	—	—	—	—	—	—	—	—	—	—	—	—	·3	·02
·7	—	—	—	·4	—	·2	—	—	—	—	—	—	—	1·6	—
29·9	9·23	15·8	4·83	16·4	7·36	38·6	9·36	37·6	11·98	9·7	1·84	17·4	—	24·8	6·67
92·3	—	28·4	—	36·2	—	54·9	—	1·2	—	78·7	—	43·1	—	40·7	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2·2	1·70	1·3	1·07	1·1	·63	·6	·37	8·3	5·37	11·0	6·44	1·2	1·20	4·2	2·81
16·0	·49	16·4	—	19·6	·21	17·8	·18	11·6	—	16·6	—	26·3	—	23·1	·42
3·6	—	4·3	—	17·7	—	15·2	·18	5·0	—	16·1	—	—	—	6·3	·02
145·7	11·42	66·2	5·90	91·2	8·20	127·2	10·10	63·6	17·35	132·1	8·28	88·0	1·20	101·0	9·95
299·5	·24	170·8	·27	557·1	1·26	384·0	1·65	410·2	—	746·9	—	205·4	·60	390·7	·57
1·9	·24	·3	—	1·5	—	2·8	·18	2·1	—	·9	—	—	—	1·3	·12
25·7	—	53·4	—	61·4	—	91·6	—	22·3	—	19·8	—	38·3	—	86·0	—
40·1	—	51·5	—	49·4	—	67·0	—	25·6	·41	31·8	—	13·2	—	58·6	·05
150·4	—	136·2	—	171·5	—	130·2	—	90·5	—	67·2	—	116·8	—	159·2	—
216·2	—	241·0	—	282·3	—	288·8	—	128·5	·41	118·7	—	168·3	—	303·8	·05
—	—	—	—	1·1	·21	—	—	—	—	—	—	—	—	·2	·07
1·5	—	·8	—	4·6	—	6·4	—	1·7	—	6·4	—	—	—	3·2	—
·5	—	—	—	—	—	·2	—	—	—	·5	—	—	—	·1	—
2·9	·24	5·9	—	1·7	—	11·0	—	3·7	—	67·6	—	—	—	8·5	·02
21·9	—	12·6	—	35·3	—	10·5	—	9·9	—	8·7	—	19·8	—	20·7	—
31·6	—	24·4	—	29·4	—	44·6	·18	14·5	—	16·6	—	17·4	—	31·3	·02
1·5	—	4·0	1·07	3·2	·21	2·4	·37	2·9	—	3·2	—	—	—	2·8	·40
12·4	—	11·8	·80	12·2	—	14·3	—	3·3	—	4·1	·46	3·0	—	9·7	·10
4·1	·24	6·4	·54	9·9	·21	7·0	·18	3·7	—	8·3	·92	2·4	—	8·1	·47
1·0	—	·3	—	·6	—	1·3	—	2·9	—	·5	—	—	—	1·6	—
16·3	—	13·4	—	9·2	—	13·2	—	12·0	—	5·1	—	6·6	—	13·7	—
11·9	—	3·8	—	11·6	—	17·3	·18	10·7	—	6·4	—	6·6	—	15·8	·02
20·4	—	11·3	·27	14·3	·42	9·5	·37	8·3	·83	3·7	·46	4·8	·60	12·8	·37
27·0	1·70	27·6	·80	45·4	·84	47·6	1·10	33·5	—	90·7	1·38	21·6	1·20	37·9	·85
143·6	2·19	90·1	1·61	154·1	·42	152·6	·92	63·6	·41	150·5	1·84	49·7	·60	132·1	1·44
35·9	—	34·6	—	34·3	—	18·9	—	15·6	—	8·3	—	19·2	—	33·0	·02
2·2	·24	3·2	·27	2·7	·21	1·7	·37	·4	—	2·3	—	1·2	—	2·1	·17
122·7	—	69·4	—	70·6	—	79·9	—	79·3	—	60·7	—	88·6	—	82·0	—
12·1	—	10·5	—	7·6	—	9·9	—	5·4	—	9·7	—	10·2	—	8·5	—
16·8	—	14·5	—	21·4	—	22·6	—	18·2	—	13·3	—	16·2	—	23·8	·02
56·8	—	44·5	—	64·7	—	73·1	—	36·3	—	39·1	—	23·4	—	63·6	—
·2	—	—	—	1·5	—	·6	—	—	—	·5	—	—	—	·6	·07
2·1	·73	1·9	1·07	7·6	2·10	4·2	1·47	5·4	2·07	—	—	—	1·80	4·5	1·49
121·2	1·21	78·6	—	77·3	1·26	139·6	·18	88·0	·41	106·3	·46	41·3	·60	101·2	·67
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2·4	—	1·3	—	3·4	—	2·0	—	2·5	—	1·4	—	2·4	—	2·1	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1332·8	18·46	949·1	12·60	1556·2	15·35	1493·0	17·26	1024·0	21·48	1612·5	13·81	795·8	6·59	1410·7	16·94

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ABSTRACT No. XVII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the ADMISSIONS and DEATHS which took place at the CHIEF STATIONS in the BENGAL COMMAND during the year 1891.

Districts.	Stations.	Average Annual Strength.	Admitted into Hospital.	Died in Command.	Ratio per 1,000 of Strength.		Ratio per 1,000 of Strength, 1881 to 1890.	
					Admissions.	Deaths.	Admissions.	Deaths.
PRESIDENCY	Fort William	1,093	1,791	8	1638·6	7·32	1421·9	13·35
	Dum-Dum	799	1,614	22	2020·0	27·53	1487·3	10·85
	Barrackpore	316	756	7	2392·4	22·15	1703·9	12·00
	Darjeeling	350	345	4	985·7	11·43	1222·6	16·07
	Gnathong	104	124	1	1192·3	9·62	*1782·1	38·46
ALLAHABAD	Allahabad	1,023	1,684	45	1646·1	43·99	1801·3	19·73
	Fort Allahabad	202	332	4	1643·6	19·80	1602·9	15·29
	Dinapore	786	1,579	9	2008·9	11·45	1593·0	19·64
	Benares	435	658	8	1512·6	18·39	1580·1	26·99
OUDH	Lucknow	2,108	3,024	49	1434·5	23·24	1348·1	14·47
	Military Prison	44	80	—	1818·2	—	†1291·3	21·84
	Cawnpore	739	972	26	1315·3	35·18	1527·2	16·37
	Sitapur	387	498	3	1286·8	7·75	1358·9	18·58
	Fyzabad	774	1,423	16	1838·5	20·67	1598·7	11·74
	Fatehgarh	220	241	4	1095·5	18·18	1941·4	19·35
ROHILKHAND	Bareilly	1,135	1,570	25	1383·3	22·03	1369·3	14·42
	Moradabad	82	92	1	1121·9	12·20	1859·3	11·46
	Shahjahanpur	379	641	3	1691·3	7·92	1574·4	12·78
	Ranikhet	909	1,088	7	1196·9	7·70	1144·4	12·60
	Chaubuttia	319	414	4	1297·8	12·54	1381·3	11·92
	Naini Tal	133	163	5	1225·6	37·59	1553·6	15·24
NARBUDDA	Jubbulpore	702	1,079	20	1537·0	28·49	1501·4	14·43
	Saugor	348	764	2	2195·4	5·75	1799·5	8·41
	Pachmarhi	113	128	1	1132·7	8·85	1703·8	8·88
BUNDELKHAND	Agra	1,174	1,587	12	1351·8	10·22	1572·9	12·99
	Jhansi	690	1,159	7	1679·7	10·14	2102·8	21·25
	Sipri	104	199	2	1913·5	19·23	‡2061·0	16·26
	Nowgong	416	830	3	1995·2	7·21	1779·8	14·54
MEERUT	Meerut	1,782	2,690	34	1509·5	19·08	1762·2	15·30
	Muttra	411	519	11	1262·8	26·76	1835·1	17·18
	Delhi	316	628	5	1987·3	15·82	3146·5	18·69
	Roorkee	327	430	10	1315·0	30·58	1628·4	16·38
	Chakrata	1,121	1,045	8	932·2	7·14	1218·0	10·46
	Landour	160	175	8	1093·8	50·00	1796·7	17·16
SIRHIND	Umballa	1,641	1,627	26	991·5	15·84	1247·7	11·24
	Subathu	438	362	1	826·5	2·28	1282·5	13·95
	Dagshai	811	700	6	863·1	7·40	1105·3	8·83
	Jutogh	271	216	3	797·0	11·07	1267·5	7·83
	Solon	231	161	3	697·0	12·99	1096·4	7·96
	Kasauli	338	474	8	1402·4	23·67	1776·6	12·50
LAHORE	Mecan Meer	1,121	2,077	11	1852·8	9·81	2590·4	29·47
	Fort Lahore	75	172	3	2293·3	40·00	2526·8	50·05
	Ferozepore	998	1,430	13	1432·9	13·02	1726·5	10·83
	Jullundur	669	843	16	1260·1	23·92	1423·3	16·06
	Mooltan	778	1,211	7	1556·6	9·00	1665·4	13·19
	Amritsar	211	307	9	1455·0	42·65	2506·9	16·55
	Bhagsu	77	103	—	1337·7	—	1271·5	12·86
	Dalhousie	828	1,260	14	1521·7	16·91	1473·6	10·10

* For 1890 only. † 9 years (1882-90). ‡ 5 years (1886-90).

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Districts.	Stations.	Average Annual Strength.	Admitted into Hospital.	Died in Command.	Ratio per 1,000 of Strength.		Ratio per 1,000 of Strength, 1881 to 1890.	
					Admissions.	Deaths.	Admissions.	Deaths.
RAWAL PINDI	Rawal Pindi	2,321	3,174	57	1367·5	24·56	1445·5	15·32
	Fort Attock	120	273	2	2275·0	16·67	2880·0	21·81
	Sialkot	1,302	2,568	14	1972·3	10·75	1446·8	15·72
	Campbellpore	277	569	1	2054·2	3·61	1444·8	16·19
	Murree	173	268	5	1549·1	28·90	1442·5	27·89
	Khyra Gully	61	57	—	934·4	—	1322·0	11·93
	Kalabagh	43	40	—	930·2	—	1333·9	12·77
	Kuldunnah	422	457	—	1082·9	—	1238·6	5·40
	Camp Gharial	398	339	11	851·8	27·64	900·3	9·31
	„ Thobba	221	281	4	1271·5	18·10	*1459·0	4·66
	„ Topa	108	105	—	972·2	—	†1133·0	7·94
PESHAWAR	Peshawar	1,449	1,445	30	997·2	20·70	2116·7	14·76
	Nowshera	493	513	7	1040·6	14·20	1532·1	11·34
	Cherat	479	521	15	1087·7	31·32	1372·2	14·50
QUETTA	Quetta	2,173	3,504	30	1612·5	13·81	‡1257·7	14·88
MARCHING	Troops on the march	1,070	1,329	11	795·8	6·59	720·7	5·67

* 7 years (1882, 1884, and 1886-90). † 7 years (1884-90). ‡ 7 years (1881-82 and 1886-90).

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ABSTRACT No. XVIII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the STATIONS in the BENGAL COMMAND at which the ADMISSIONS and DEATHS from ENTERIC FEVER took place in each of the four quarters of the year 1891.

Districts.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Presidency	Fort William	2	—	4	1	2	3	1	—	9	4
	Dum Dum	—	—	3	1	12	6	—	—	15	7
	Darjeeling	—	1	1	—	—	—	—	—	1	1
Allahabad	Allahabad	6	1	7	3	6	—	3	—	22	4
	Fort Allahabad	2	1	2	1	—	—	2	—	6	2
	Dinapore	—	—	2	—	2	1	—	—	4	1
	Benares	1	—	1	—	6	3	1	—	9	3
Oudh	Lucknow	42	2	42	11	15	4	27	3	126	20
	Cawnpore	2	1	2	2	4	1	9	2	17	6
	Sitapur	—	—	—	—	1	1	5	1	6	2
	Fyzabad	6	1	9	3	2	—	1	—	18	4
	Fatehgarh	—	1	2	1	—	—	—	—	2	2
Rohilkhand	Bareilly	5	2	23	6	8	2	20	1	56	11
	Shahjahanpur	1	—	—	—	1	—	3	1	5	1
	Ranikhet	—	—	14	3	3	1	—	1	17	5
	Chaubuttia	—	—	1	—	—	—	—	—	1	—
	Naini Tal	—	—	3	2	2	—	2	1	7	3
Narbudda	Jubbulpore	4	2	4	5	4	3	1	1	13	11
	Pachmarhi	—	—	—	—	—	—	2	—	2	—
Bundelkhand	Agra	1	—	6	1	7	—	9	—	23	1
	Jhansi	11	2	—	—	—	—	2	—	13	2
	Sipri	—	—	—	—	7	2	—	—	7	2
	Nowgong	7	1	1	—	—	—	—	—	8	1

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Districts.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Meerut	Meerut	1	1	21	9	12	1	27	5	61	16
	Muttra	—	—	4	2	3	—	13	4	20	6
	Delhi	—	—	—	—	—	—	3	1	3	1
	Roorkee	1	2	5	1	5	2	2	2	13	7
	Chakrata	—	—	13	3	9	3	1	—	23	6
	Landour	—	—	3	2	—	—	—	—	3	2
Sirhind	Umballa	10	2	7	4	3	—	6	4	26	10
	Subathu	—	—	4	—	3	—	—	—	7	—
	Dagshai	—	—	4	1	7	—	—	—	11	1
	Jutogh	—	—	1	—	6	2	—	—	7	2
	Solon	—	—	2	1	2	1	—	—	4	2
	Kasauli	—	—	2	2	2	—	—	1	4	3
Lahore	Meean Meer	1	—	8	2	3	1	2	1	14	4
	Port Lahore	—	—	1	—	—	—	—	—	1	—
	Ferozepore	2	—	5	1	2	1	—	—	9	2
	Jullundur	1	—	12	5	3	2	2	1	18	8
	Mooltan	—	—	6	3	2	—	—	—	8	3
	Amritsar	—	—	3	2	4	4	—	—	7	6
	Bhagsu	—	—	—	—	1	—	—	—	1	—
	Dalhousie	—	—	10	4	10	8	—	—	20	12
Rawal Pindi	Rawal Pindi	3	1	76	18	25	11	12	1	116	31
	Fort Attock	—	—	1	—	—	—	—	—	1	—
	Sialkot	4	—	17	4	11	2	14	2	46	8
	Campbellpore	—	—	2	—	2	—	—	—	4	—
	Murree	—	—	2	1	3	—	—	1	5	2
	Khyra Gully	—	—	1	—	—	—	—	—	1	—
	Kalabagh	—	—	2	—	—	—	—	—	2	—

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Districts.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
	Camp Gharial	—	—	14	4	10	5	4	—	28	9
	„ Thobba	—	—	4	1	—	—	1	—	5	1
	„ Topa -	—	—	1	—	1	—	—	—	2	—
Peshawar -	Peshawar -	1	—	14	8	12	3	1	—	28	11
	Nowshera -	1	—	6	3	—	—	3	—	10	3
	Cherat - -	—	—	21	7	32	8	—	—	53	15
Quetta -	Quetta - -	1	—	3	—	14	1	3	3	21	4
Marching -	Troops on the March.	7	—	—	—	—	—	22	—	29	—
	Total - -	123	21	402	128	269	82	204	37	998	268

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ABSTRACT No. XIX.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the STATIONS in the BENGAL COMMAND at which the ADMISSIONS and DEATHS from CHOLERA took place in each of the four quarters of the year 1891.

Districts.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Presidency -	Dum Dum -	—	—	1	1	—	—	—	—	1	1
Allahabad -	Allahabad -	—	—	51	29	—	—	—	—	51	29
	Fort Allahabad	—	—	1	1	—	—	—	—	1	1
	Dinapore -	—	—	2	2	—	—	—	—	2	2
	Benares -	—	—	—	—	3	3	—	—	3	3
Oudh - -	Lucknow -	—	—	—	—	—	—	15	9	15	9
	Cawnpore -	—	—	2	—	13	15	—	—	15	15
	Fyzabad -	1	1	2	1	—	—	6	4	9	6
Rohilkhand -	Bareilly -	—	—	—	—	—	—	2	1	2	1
Narbudda -	Jubbulpore -	—	—	2	1	—	—	—	—	2	1
Meerut - -	Meerut - -	—	—	—	—	8	6	—	—	8	6
	Roorkee -	—	—	1	1	—	—	—	—	1	1
Sirhind - -	Umballa -	—	—	—	—	1	1	4	3	5	4
Lahore - -	Meean Meer -	—	—	—	—	3	1	—	—	3	1
	Fort Lahore -	—	—	—	—	2	2	—	—	2	2
Rawal Pindi -	Rawal Pindi -	—	—	—	—	1	1	—	—	1	1
	Camp Thobba	—	—	2	1	—	—	—	—	2	1
Peshawar -	Peshawar -	—	—	—	—	3	2	17	11	20	13
Quetta - -	Quetta - -	—	—	—	—	24	14	—	—	24	14
Marching -	Troops on the March.	—	—	—	—	—	—	2	2	2	2
	Total -	1	1	64	37	58	45	46	30	169	113

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ABSTRACT No. XX.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the PREVALENCE of DYSENTERY, DIARRHŒA, and HEPATIC DISEASES (Congestion, Inflammation, and Abscess of Liver) in each of the DISTRICTS in the BENGAL COMMAND during the Year 1891.

Districts.	Presidency.		Allahabad.		Oudh.		Rohilkhand.		Narbudda.		Bundelkhand.		Meerut.		Sirhind.		Lahore.		Rawal Pindi.		Peshawar.		Quetta.		Marching.		Total.	
Strength.	2,662		2,446		4,272		2,957		1,163		2,384		4,117		3,730		4,757		5,446		2,421		2,173		1,670		40,198	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Dysentery - -	134	3	79	—	137	6	73	1	42	2	40	1	66	2	61	—	93	1	97	1	28	—	36	—	44	—	930	17
Diarrhœa - - -	137	—	77	—	176	1	86	—	31	—	67	1	141	—	88	—	220	—	227	1	32	—	72	—	40	—	1,394	3
Hepatic Diseases -	102	7	38	2	92	3	61	3	14	1	50	3	55	8	80	4	82	2	88	3	6	1	61	4	10	1	739	42
Total - - -	373	10	194	2	405	10	220	4	87	3	157	5	262	10	229	4	395	3	412	5	66	1	169	4	94	1	3,063	62

Ratio per 1,000 of Mean Strength.

Dysentery - -	50·3	1·13	32·3	—	32·1	1·40	24·7	·34	36·1	1·72	16·8	·42	16·0	·49	16·4	—	19·6	·21	17·8	·18	11·6	—	16·6	—	26·3	—	23·1	·42
Diarrhœa - - -	51·5	—	31·5	—	41·2	·23	29·1	—	26·7	—	28·1	·42	34·2	—	23·6	—	46·2	—	41·7	·18	13·2	—	33·1	—	24·0	—	34·7	·07
Hepatic Diseases -	38·3	2·63	15·5	·82	21·5	·70	20·6	1·01	12·0	·86	21·0	1·26	13·4	1·94	21·4	1·07	17·2	·42	16·2	·55	2·5	·41	28·1	1·84	6·0	·60	18·4	1·04
Total - - -	140·1	3·76	79·3	·82	94·8	2·34	74·4	1·35	74·8	2·58	65·9	2·10	63·6	2·43	61·4	1·07	83·0	·63	75·7	·92	27·3	·41	77·8	1·84	56·3	·60	76·2	1·54

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ABSTRACT No. XXI.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the PREVALENCE and MORTALITY, in the Cantonments of the BENGAL COMMAND, due to DYSENTERY, DIARRHŒA, and HEPATIC DISEASES (Congestion, Inflammation, and Abscess of the Liver) in each Quarter of the Year 1891.

—	Strength.	Dysentery.				Diarrhœa.				Hepatic Diseases.				Total.			
		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
1st Quarter -	40,128	132	—	3·3	—	184	2	4·6	·05	153	12	3·8	·30	469	14	11·7	·35
2nd „ -	39,682	220	2	5·5	·05	390	—	9·8	—	201	8	5·1	·20	811	10	20·4	·25
3rd „ -	40,783	240	4	5·9	·10	464	—	11·4	—	213	12	5·2	·29	917	16	22·5	·39
4th „ -	40,214	338	11	8·4	·27	356	1	8·9	·02	172	10	4·3	·25	866	22	21·5	·55
Total -	40,202	930	17	23·1	·42	1,394	3	34·7	·07	739	42	18·4	1·04	3,063	62	76·2	1·54

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ABSTRACT No. XXII.—TABLE showing the AVERAGE STRENGTH, ADMISSION and SICK among the TROOPS stationed in MADRAS during the Year 1891, with

Average Strength 13,256. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	2	—	—	—	—	—	·94
Other Eruptive Fevers	107	—	—	—	—	—	4·37
Enteric Fever	141	41	—	41	2	—	18·16
Other Continued Fevers	937	—	—	—	2	—	39·52
Yellow Fever	—	—	—	—	—	—	—
Cholera	29	21	—	21	—	—	·33
Dysentery	635	6	—	6	25	7	43·40
Other Diseases	109	1	—	1	—	—	3·06
Total	1,960	69	—	69	29	7	109·77
Sub-Group II.—Malarial Fevers	3,314	15	—	15	25	9	131·31
Sub-Group III.—Septic Diseases	7	3	—	3	—	—	·30
Sub-Group IV. Syphilis, Primary	1,608	—	—	—	—	—	143·19
„ Secondary	989	1	2	3	121	47	118·26
Gonorrhœa	1,684	—	—	—	—	—	122·24
Total	4,281	1	2	3	121	47	383·69
Sub-Group V.—Hydrophobia, &c.	—		—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	18	—	—	—	—	—	·67
Sub-Group II. Scurvy	1	—	—	—	—	—	·03
Alcoholism	81	2	—	2	—	—	3·12
GROUP "C."							
Debility, &c.	370	1	—	1	37	17	25·99
GROUP "D."							
Rheumatism	482	—	—	—	9	5	34·61
Tubercular Diseases	36	4	2	6	20	22	6·49
Other Diseases	130	3	1	4	12	8	12·39
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	115	4	—	4	12	12	6·71
Mental „	34	1	—	1	28	23	11·31
2. Eye	176	—	—	—	4	4	9·75
3 & 4. Other Organs of Special Senses	174	—	—	—	4	4	8·19
5. Circulatory System	79	5	1	6	30	26	8·80
6. Respiratory „	378	10	—	10	6	1	21·43
7. Digestive „	1,394	25	1	26	32	8	65·43
8. Lymphatic and Glandular System	717	—	—	—	10	6	86·90
9. Urinary System	37	6	—	6	5	—	4·21
10. Generative „	796	—	—	—	5	1	53·96
11. Organs of Locomotion	84	—	—	—	9	8	6·07
12. Connective Tissue	268	—	—	—	3	1	14·70
13. Skin	910	—	—	—	1	1	37·47
III.—POISONS	8	2	—	2	—	—	·13
IV.—INJURIES.							
1. General	47	28	1	29	2	1	1·62
2. Local	1,276	8	—	8	11	5	58·55
3. In Action	—	1	—	1	—	2	—
No appreciable disease	26	—	—	—	—	—	1·59
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	17,199	188*	8	196	415	218	1105·22
*Average of 10 years 1881–90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios years 1886 to 1892 in

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sions into Hospital, Deaths, Numbers Invalided and Constantly the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					Average Ratio per 1,000 from 1886 to 1890.†				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
·1	—	—	—	·07	·7	·11	—	—	·05
8·1	—	—	—	·33	1·5	—	—	—	·05
10·6	3·09	·15	—	1·37	11·4	3·44	·06	—	1·34
70·7	—	·15	—	2·98	72·7	·08	·08	—	3·39
—	—	—	—	—	—	—	—	—	—
2·2	1·58	—	—	·03	1·5	1·15	—	—	·02
47·9	·45	1·89	·53	3·27	53·9	1·39	2·39	·31	4·14
8·2	·08	—	—	·23	12·1	·05	—	—	·39
147·8	5·20	2·19	·53	8·28	153·8	6·22	2·53	·31	9·38
250·0	1·13	1·89	·68	9·91	234·2	1·19	·80	·15	7·72
·5	·23	—	—	·02	·7	·05	—	—	·05
121·3	—	—	—	10·80	108·4	—	·01	—	9·39
74·6	·23	9·13	3·54	8·92	50·1	·11	3·05	1·08	5·32
127·0	—	—	—	9·22	149·9	—	·08	—	10·92
322·9	·23	9·13	3·54	28·94	308·4	·11	3·15	1·08	25·63
—	—	—	—	—	—	·01	—	—	—
1·4	—	—	—	·05	3·6	—	·01	—	·09
·1	—	—	—	·01	·1	—	—	—	·01
6·1	·15	—	—	·23	11·6	·01	·01	—	·36
27·9	·08	2·79	1·28	1·96	32·2	·11	3·65	1·70	2·04
36·4	—	·68	·38	2·61	30·5	·05	·98	·36	2·07
2·7	·45	1·51	1·66	·49	3·1	·78	1·19	·90	·62
9·8	·30	·90	·60	·94	9·9	·14	·62	·22	·69
8·7	·30	·90	·90	·51	9·9	·41	1·25	1·00	·66
2·6	·08	2·11	1·73	·85	1·7	·03	1·45	1·60	·52
13·3	—	·30	·30	·74	13·4	—	·51	·68	·75
13·1	—	·30	·30	·62	13·0	—	·90	·76	·67
6·9	·45	2·26	1·96	·66	9·2	·45	2·61	1·73	·96
28·5	·75	·45	·08	1·62	26·3	·83	1·00	·42	1·54
105·2	1·96	2·41	·69	4·93	147·8	2·02	3·00	1·00	5·87
54·1	—	·76	·45	6·55	52·4	·01	·51	·12	6·13
2·8	·45	·38	—	·32	3·0	·08	·30	·19	·97
60·0	—	·38	·08	4·07	93·4	·05	·42	·26	6·12
6·3	—	·68	·60	·46	6·2	·01	·76	·61	·45
20·2	—	·23	·08	1·11	19·9	—	·17	·05	·98
68·6	—	·08	·08	2·82	73·4	·01	·11	·09	3·06
·6	·15	—	—	·01	·6	·05	—	—	·02
3·5	2·19	·15	·08	·12	2·3	1·84	·14	—	·12
96·3	·60	·83	·38	4·42	113·3	·78	·98	·76	5·01
—	·08	—	·15	—	·6	·23	·17	·28	·06
2·0	—	—	—	·12	1·8	—	—	—	·07
—	—	—	—	—	—	—	—	—	—
1297·4	14·78	31·31	16·44	83·37	1376·3	16·08	27·23	14·27	82·92
1249·4	13·60	28·17	13·40	72·69	—	—	—	—	—

for the six years 1886 to 1891 will be given in the Report for 1892; those for the that for 1893, &c., &c.

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ABSTRACT No. XXIII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL in each of the MILITARY DIVISIONS in the MADRAS

Military Divisions.	Madras District.		Southern. District.		Belgaum and Bangalore Districts.		Secunderabad District.		Rangoon District.		Myingyan and Mandalay Districts.		Depôts.		On the March.		Total.	
Average Strength	989		714		3,685		2,700		1,864		2,650		481		173		13,256	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
I.—GENERAL DISEASES.																		
GROUP "A."																		
Sub-Group I. Small-pox	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	2	—
Other Eruptive Fevers	3	—	4	—	99	—	—	—	1	—	—	—	—	—	—	—	107	—
Enteric Fever	17	6	1	—	53	9	33	5	6	5	28	15	2	1	1	—	141	41
Other Continued Fevers	124	—	24	—	223	—	148	—	305	—	46	—	42	—	25	—	937	—
Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cholera	—	—	—	—	1	1	13	9	—	—	2	2	—	—	13	9	29	21
Dysentery	22	—	47	—	95	1	85	1	177	1	152	3	41	—	16	—	635	6
Other Diseases	—	—	1	—	2	—	—	—	—	—	106	1	—	—	—	—	109	1
Total	166	6	77	—	474	11	280	15	489	6	334	21	85	1	55	9	1,960	69
Sub-Group II.—Malarial Fevers	81	2	50	—	535	—	58	—	297	3	2,138	7	41	—	114	3	3,314	15
Sub-Group III.—Septic Diseases	—	—	—	—	5	2	1	1	—	—	1	—	—	—	—	—	7	3
Sub-Group IV. Syphilis, Primary	102	—	73	—	521	—	367	—	321	—	174	—	49	—	1	—	1,608	—
" Secondary	48	—	38	—	393	—	142	—	109	—	195	—	62	1	2	—	989	1
Gonorrhœa	138	—	98	—	453	—	362	—	251	—	326	—	55	—	1	—	1,684	—
Total	288	—	209	—	1,367	—	871	—	681	—	695	—	166	1	4	—	4,281	1
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
GROUP "B."																		
Sub-Group I.—Parasitic Diseases	1	—	—	—	9	—	3	—	—	—	5	—	—	—	—	—	18	—
Sub-Group II. Scurvy	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—
Alcoholism	8	—	5	—	20	1	20	—	14	1	13	—	1	—	—	—	81	2
GROUP "C."																		
Debility, &c.	28	—	11	—	56	—	84	—	32	—	137	1	18	—	4	—	370	1
GROUP "D."																		
Rheumatism	42	—	25	—	125	—	104	—	86	—	177	—	22	—	1	—	482	—
Tubercular Diseases	7	—	—	—	9	—	7	1	4	1	3	1	6	1	—	—	36	4
Other Diseases	13	—	10	—	18	—	19	1	21	—	28	1	21	—	—	1	130	3
II.—LOCAL DISEASES.																		
Diseases of the—																		
1. Nervous System { Nervous Diseases	14	—	11	—	34	1	15	—	11	1	17	2	13	—	—	—	115	4
{ Mental "	3	—	1	—	7	1	5	—	7	—	9	—	2	—	—	—	34	1
2. Eye	18	—	11	—	66	—	26	—	9	—	34	—	11	—	1	—	176	—
3 & 4. Other Organs of Special Senses.	25	—	28	—	35	—	23	—	24	—	32	—	7	—	—	—	174	—
5. Circulatory System	4	—	2	—	20	2	13	—	7	1	13	2	20	—	—	—	79	5
6. Respiratory "	29	3	15	1	137	4	67	—	56	1	53	1	20	—	1	—	378	10
7. Digestive "	87	2	94	—	492	10	235	5	169	6	215	2	60	—	42	—	1,394	25
8. Lymphatic and Glandular System.	106	—	30	—	171	—	180	—	50	—	128	—	49	—	3	—	717	—
9. Urinary System	3	—	2	1	9	—	5	—	9	2	4	2	5	1	—	—	37	6
10. Generative "	92	—	52	—	140	—	118	—	68	—	267	—	56	—	3	—	796	—
11. Organs of Locomotion	5	—	4	—	32	—	9	—	14	—	14	—	6	—	—	—	84	—
12. Connective Tissues	24	—	19	—	59	—	34	—	63	—	52	—	16	—	1	—	268	—
13. Skin	88	—	102	—	201	—	120	—	141	—	223	—	33	—	2	—	910	—
III.—POISONS	—	—	1	—	—	—	4	2	—	—	3	—	—	—	—	—	8	2
IV.—INJURIES.																		
1. General	4	3	1	2	6	4	2	3	11	3	19	10	—	—	4	3	47	28
2. Local	90	3	61	—	464	2	270	—	129	1	215	1	41	1	6	1	1,276	9
3. In Action	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
No appreciable disease	5	—	—	—	2	—	13	—	1	—	5	—	—	—	—	—	26	—
Cause unknown (refers to deaths only).	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Total	1,231	19	821	4	4,493	38	2,596	28	2,393	26	4,735	51	699	5	241	17	17,199	188

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OFFICER, showing the PREVALENCE and MORTALITY of the different Classes of DISEASE COMMAND, for the Year 1891, with the Ratio per 1,000 of the Strength.

Madras District.		Southern District.		Belgaum and Bangalore Districts.		Secundera-bad District.		Rangoon District.		Myingyan and Mandalay Districts.		Depôts.		On the March.		Total.	
Ratio per 1,000 of Mean Strength.																	
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
—	—	—	—	0·3	—	0·4	—	—	—	—	—	—	—	—	—	0·1	—
3·0	—	5·6	—	26·9	—	—	—	0·5	—	—	—	—	—	—	—	8·1	—
17·2	6·07	1·4	—	14·4	2·44	12·2	1·85	3·2	2·68	10·6	5·66	4·2	2·08	5·8	—	10·6	3·09
125·4	—	33·6	—	60·5	—	54·8	—	163·6	—	17·4	—	87·3	—	144·5	—	70·7	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	0·3	0·27	4·8	3·33	—	—	0·7	0·75	—	—	75·1	52·02	2·2	1·58
22·2	—	65·8	—	25·8	0·27	31·5	0·37	95·0	·54	57·3	1·13	85·2	—	92·5	—	47·9	0·45
—	—	1·4	—	0·5	—	—	—	—	—	40·0	0·38	—	—	—	—	8·2	0·08
167·8	6·07	107·8	—	128·6	2·98	103·7	5·56	262·3	3·22	126·0	7·92	176·7	2·08	317·9	52·02	147·8	5·20
81·9	2·02	70·0	—	145·2	—	21·5	—	159·3	1·60	806·8	2·64	85·2	—	659·0	17·34	250·0	1·13
—	—	—	—	1·4	0·54	0·4	0·37	—	—	0·4	—	—	—	—	—	0·5	0·22
103·1	—	102·2	—	141·4	—	135·9	—	172·2	—	65·7	—	101·9	—	5·8	—	121·3	—
46·5	—	53·2	—	106·7	—	52·6	—	58·5	—	73·6	—	128·9	2·08	11·6	—	74·6	0·08
139·5	—	137·3	—	122·9	—	134·1	—	134·6	—	123·0	—	114·3	—	5·8	—	127·0	—
291·2	—	292·7	—	371·0	—	322·6	—	365·3	—	262·3	—	345·1	2·08	23·1	—	322·9	0·08
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1·0	—	—	—	2·5	—	1·1	—	—	—	1·9	—	—	—	—	—	1·4	—
—	—	—	—	—	—	—	—	—	—	0·4	—	—	—	—	—	0·1	—
8·1	—	7·0	—	5·4	0·27	7·4	—	7·5	0·54	4·9	—	2·1	—	—	—	6·1	0·15
28·3	—	15·4	—	15·2	—	31·1	—	17·2	—	51·7	0·38	37·4	—	23·1	—	27·9	0·08
42·5	—	35·0	—	33·9	—	38·5	—	46·1	—	29·1	—	45·7	—	5·8	—	36·4	—
7·1	—	—	—	2·5	—	2·6	0·37	2·2	0·54	1·1	0·38	12·5	2·08	—	—	2·7	0·30
13·1	—	14·0	—	4·9	—	7·0	0·37	11·3	—	10·6	0·38	43·7	—	—	5·78	9·8	0·22
14·2	—	15·4	—	9·2	0·27	5·6	—	5·9	0·54	6·4	0·75	27·0	—	—	—	8·7	0·30
3·0	—	1·4	—	1·9	0·27	1·9	—	3·8	—	3·4	—	4·2	—	—	—	2·6	0·08
18·2	—	15·4	—	17·9	—	9·6	—	4·8	—	12·8	—	22·9	—	5·8	—	13·3	—
25·3	—	39·2	—	9·5	—	8·5	—	12·9	—	12·1	—	14·5	—	—	—	13·1	—
4·0	—	2·8	—	5·4	0·54	4·8	—	3·8	0·54	4·9	0·75	41·6	—	—	—	6·0	0·38
29·3	3·03	21·0	1·40	37·2	1·09	24·8	—	30·0	0·54	20·0	0·38	41·6	—	5·8	—	28·5	0·76
88·0	2·02	131·7	—	153·5	2·72	87·0	1·85	90·7	3·22	81·1	0·75	124·7	—	242·8	—	105·2	1·89
107·2	—	42·0	—	46·4	—	66·7	—	26·8	—	46·3	—	101·9	—	17·3	—	54·1	—
3·0	—	2·8	1·40	2·4	—	1·9	—	4·8	1·07	1·5	0·75	10·4	2·08	—	—	2·8	0·45
93·0	—	72·8	—	38·0	—	45·7	—	36·5	—	100·8	—	116·4	—	17·3	—	60·0	—
5·1	—	5·6	—	8·7	—	3·3	—	7·5	—	5·4	—	12·5	—	—	—	6·3	—
24·3	—	26·6	—	16·0	—	12·6	—	33·8	—	19·6	—	33·3	—	5·8	—	20·2	—
89·0	—	142·9	—	54·5	—	44·4	—	75·6	—	84·1	—	68·6	—	11·6	—	63·6	—
—	—	1·4	—	—	—	1·5	0·74	—	—	1·1	—	—	—	—	—	0·6	0·15
4·0	3·03	1·4	2·80	1·6	1·09	0·7	1·11	5·9	1·60	7·1	3·77	—	—	23·1	17·34	3·5	2·11
91·0	3·03	85·4	—	125·9	0·54	100·0	—	69·2	0·54	81·1	0·38	85·2	2·08	34·7	5·78	96·3	0·68
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5·1	—	—	—	0·5	—	4·8	—	0·5	—	1·9	—	—	—	—	—	2·0	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1244·7	19·21	1149·8	5·60	1219·2	10·31	957·7	10·37	1283·8	13·96	1786·8	19·24	1453·2	10·40	1393·1	98·26	1297·4	14·18

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ABSTRACT No. XXIV.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the AVERAGE STRENGTH, AVERAGE CONSTANTLY SICK, ADMISSIONS, DEATHS, and INVALIDS at the different STATIONS and DISTRICTS in the MADRAS COMMAND, for the Year 1891.

Districts.	Stations.	Average Strength.	Average constantly Sick.	Admitted.	Died in and out of Hospital.	Invalided.	Ratio per 1,000 of Strength.					
							Average constantly Sick.	Admitted.	Died in and out of Hospital.	Invalided.	Average of previous Period of 10 Years.	
											Admitted.	Died.
Madras District	Madras and Pallaveram.	703	55	814	12	30	78·23	1157·9	17·69	42·67	1382·4	14·90
	St. Thomas' Mount	286	22	417	7	5	76·92	1458·0	24·47	17·48	1364·8	11·21
	Total	989	77	1,231	19	35	77·85	1244·7	19·21	35·39	—	—
Southern District	Wellington Regiment.	363	23	338	2	1	63·36	931·1	5·51	2·75	1147·9*	5·03
	Cannanore	102	6	164	—	1	58·82	1607·8	—	9·80	1013·6	7·12
	Calicut	99	5	117	1	1	50·50	1181·8	10·10	10·10	1183·8	7·82
	Malapuram	150	12	202	1	—	80·00	1346·7	6·67	—	1277·7	11·00
	Total	714	46	821	4	3	64·42	1149·9	5·60	4·20	—	—
Belgaum and Bangalore Districts	Bangalore	1,973	178	2,422	22	54	90·22	1227·6	11·15	27·37	1081·6	7·67
	Bellary	622	59	953	10	21	94·85	1532·1	16·08	33·76	1454·0	7·39
	Belgaum	1,060	67	1,062	6	38	63·21	1001·9	5·66	35·85	1052·1†	5·15
	Ramandroog	30	2	56	—	—	66·66	1866·7	—	—	580·4	—
	Total	3,685	306	4,493	38	113	83·04	1219·2	10·31	30·66	—	—
Secunderabad District	Secunderabad	2,700	184	2,586	28	35	68·15	957·7	10·37	12·96	1086·9	12·53
Rangoon District	Rangoon	958	97	1,293	11	67	101·25	1349·7	11·48	69·94	1365·9	15·13
	Meiktila	234	25	319	3	—	106·84	1363·2	12·82	—	1640·3	14·51
	Toungoo	530	35	642	10	—	66·04	1211·3	18·87	—	1149·0	13·04
	Port Blair	142	5	139	2	—	35·21	978·9	14·08	—	969·7	8·65
	Total	1,864	162	2,393	26	67	86·91	1283·8	13·95	35·94	—	—

* Four years, 1887 to 1890.

† Six years, 1885 to 1890.

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ABSTRACT No. XXIV.—*continued.*

Districts.	Stations.	Average Strength.	Average constantly Sick.	Admitted.	Died in and out of Hospital.	Invalided.	Ratio per 1,000 of Strength.				Average of previous Period of 10 Years.	
							Average constantly Sick.	Admitted.	Died in and out of Hospital.	Invalided.	Admitted.	Died.
Myingyan and Mandalay Districts.	Mandalay - -	990	124	1,841	21	55	125·25	1859·6	21·21	55·55	2051·9*	27·95
	Bhamo - -	250	19	501	2	3	76·00	2004·0	8·00	12·00	2976·0	40·95
	Myingyan - -	259	26	530	7	10	100·39	2046·3	27·03	38·61	1904·4	43·71
	Shwebo - -	451	26	626	9	8	57·65	1388·0	19·96	17·74	1996·6	13·54
	Bernardmyo -	186	14	226	5	—	75·26	1215·0	26·88	—	1234·9	20·93
	Thayetmyo -	514	50	1,011	7	15	97·27	1966·9	13·62	29·18	1288·4	13·24
	Total -	2,650	259	4,735	51	91	97·74	1786·8	19·24	34·34	—	—
Depôts - -	Poonamallee -	108	25	211	5	55	231·48	1953·7	46·29	509·26	2190·2	47·37
	Wellington -	373	37	488	—	16	99·19	1308·3	—	42·89	1213·7	10·19
	Total -	481	62	699	5	71	128·90	1453·2	10·40	147·61	—	—
Marching - -	On the March -	173	9	241	17	—	52·02	1393·1	98·26	—	1208·4	46·41

* Three years, 1888 to 1890.

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ABSTRACT No. XXV.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the STATIONS in the MADRAS COMMAND at which the ADMISSIONS and DEATHS from ENTERIC FEVER took place in each of the four quarters of the Year 1891.

Districts.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Madras District	Madras	2	—	5	4	6	—	2	—	15	4
	St. Thomas Mount.	—	—	1	1	1	1	—	—	2	2
	Poonamallee	2	—	—	1	—	—	—	—	2	1
Southern District.	Cannanore	—	—	—	—	—	—	1	—	1	—
Belgaum and Bangalore Districts	Bangalore	4	—	18	3	16	3	11	2	49	8
	Bellary	1	—	—	—	1	1	2	—	4	1
Secunderabad District.	Secunderabad	4	—	12	3	11	—	6	2	33	5
Rangoon District	Rangoon	—	—	—	—	—	—	2	2	2	2
	Toungoo	—	—	2	1	2	2	—	—	4	3
Myingyan and Mandalay Districts	Mandalay	—	—	—	—	—	—	11	5	11	5
	Thayetmyo	1	—	1	1	—	—	1	—	3	1
	Myingyan	—	—	—	1	—	1	1	—	1	2
	Shwebo	—	—	3	1	5	3	—	—	8	4
	Bernardmyo	—	—	2	1	2	1	1	1	5	3
	On the March	1	—	—	—	—	—	—	—	1	—
	Total	15	—	44	17	44	12	38	12	141	41

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ABSTRACT No. XXVI.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the STATIONS in the MADRAS COMMAND at which the ADMISSIONS and DEATHS from CHOLERA took place in each of the four quarters of the Year 1891.

Districts.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Belgaum and Bangalore District	Bangalore	—	—	1	1	—	—	—	—	1	1
Secunderabad District	Secunderabad	—	—	—	—	1	1	12	8	13	9
Myingyan and Mandalay Districts	Mandalay	—	—	1	1	—	—	—	—	1	1
	Myingyan	1	1	—	—	—	—	—	—	1	1
Marching	On the March	—	—	13	9	—	—	—	—	13	9
	Total	1	1	15	11	1	1	12	8	29	21

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ABSTRACT No. XXVII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the prevalence of DYSENTERY, DIARRHŒA, and HEPATITIS in each of the DISTRICTS in the MADRAS COMMAND for 1891.

Districts.	Madras District.		Southern. District.		Belgaum and Bangalore Districts.		Secundera-bad District.		Rangoon District.		Myingyan and Manda-lay Districts.		On the March.		Total.	
Strength.	1,097		1,087		3,685		2,700		1,864		2,650		173		13,256	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Dysentery	51	—	59	—	95	1	85	1	177	1	152	3	16	—	635	6
Diarrhœa	7	—	7	—	66	—	24	—	1	—	19	—	39	—	163	—
Hepatitis and Abscess of Liver	9	1	7	—	30	8	19	4	31	6	12	1	—	—	108	20
Total	67	1	73	—	191	9	128	5	209	7	183	4	55	—	906	26
Ratio per 1,000 of Strength.																
Dysentery	46·5	—	54·3	—	25·8	·27	31·5	·37	95·0	·54	57·4	1·13	92·6	—	47·9	·45
Diarrhœa	6·4	—	6·4	—	17·9	—	8·9	—	·5	—	7·2	—	225·4	—	12·3	—
Hepatitis and Abscess of Liver	8·2	·91	6·4	—	8·1	2·17	7·0	1·48	16·6	3·22	4·5	·38	—	—	8·1	1·51
Total	61·1	·91	67·2	—	51·8	2·44	47·4	1·85	112·1	8·76	69·1	1·51	317·9	—	68·3	1·96

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ABSTRACT No. XXVIII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the PREVALENCE and MORTALITY in the MADRAS COMMAND, due to DYSENTERY, DIARRHŒA, and HEPATITIS, in each Quarter of the Year 1891.

—	Strength.	Dysentery.				Diarrhœa.				Hepatitis (including Abscess of Liver).				Total.			
		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.		Number.		Ratio per 1,000 of Strength.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
1st Quarter -	13,261	108	1	8·1	·08	29	—	2·2	—	34	4	2·6	·30	171	5	12·9	·38
2nd „ -	13,286	188	1	14·1	·08	81	—	6·1	—	15	2	1·1	·15	284	3	21·4	·23
3rd „ -	13,755	203	2	14·8	·15	27	—	2·0	—	32	5	2·3	·36	262	7	19·0	·51
4th „ -	12,723	136	2	10·7	·16	26	—	2·0	—	27	9	2·1	·70	189	11	14·8	·86
Total for the Year	13,256	635	6	47·9	·45	163	—	12·3	—	108	20	8·1	1·51	906	26	68·3	1·96

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ABSTRACT No. XXIX.—TABLE showing the AVERAGE STRENGTH, ADMISSION, and DEATHS from DISEASES and INJURIES, and the NUMBER INVALIDED and SENT HOME SICK among the TROOPS stationed in BOMBAY during the Year 1891, with

Average Strength, 12,724. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number Constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	1	—	—	—	—	—	·02
Other Eruptive Fevers	2	—	—	—	—	—	·26
Enteric Fever	204	71	—	71	1	—	23·54
Other Continued Fevers	762	1	—	1	—	—	32·66
Yellow Fever	—	—	—	—	—	—	—
Cholera	53	33	—	33	—	—	1·41
Dysentery	331	6	—	6	9	1	17·40
Other Diseases	33	1	—	1	—	—	·82
Total	1,376	112	—	112	10	1	76·11
Sub-Group II.—Malarial Fevers	4,638	1	1	2	38	6	136·37
Sub-Group III.—Septic Diseases	9	—	—	—	—	—	·48
Sub-Group IV. Syphilis, Primary	1,883	—	—	—	1	—	148·15
„ Secondary	665	—	1	1	23	16	56·42
Gonorrhœa	1,964	—	—	—	—	—	139·07
Total	4,512	—	1	1	24	16	343·64
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	45	—	—	—	—	—	1·39
Sub-Group II. Scurvy	7	—	—	—	1	—	·31
Alcoholism	72	—	—	—	—	—	1·44
GROUP "C."							
Debility, &c.	460	—	—	—	78	26	25·25
GROUP "D."							
Rheumatism	301	1	—	1	13	5	19·94
Tubercular Diseases	63	7	2	9	21	11	7·78
Other Diseases	167	—	2	2	9	3	8·58
II.—LOCAL DISEASES.							
Diseases of the—							
1. Nervous System Nervous Diseases	121	4	—	4	23	15	9·02
1. Nervous System Mental „	40	—	—	—	15	20	4·48
2. Eye	174	—	—	—	6	3	9·17
3 & 4. Other Organs of Special Senses	190	—	—	—	17	8	9·59
5. Circulatory System	163	2	—	2	32	34	12·17
6. Respiratory „	390	8	—	8	10	7	17·98
7. Digestive „	1,576	13	1	14	20	11	57·15
8. Lymphatic and Glandular System	440	—	—	—	5	4	44·36
9. Urinary System	28	2	—	2	4	3	2·00
10. Generative „	620	—	—	—	6	2	38·00
11. Organs of Locomotion	93	—	—	—	12	6	6·84
12. Connective Tissue	222	—	—	—	2	—	10·37
13. Skin	768	—	—	—	3	1	31·25
III.—POISONS	13	1	—	1	—	—	·25
IV.—INJURIES.							
1. General	38	27	—	27	2	1	2·07
2. Local	1,359	3	—	3	18	10	59·98
3. In Action	—	—	—	—	—	—	—
No appreciable disease	19	—	—	—	—	—	·57
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	17,904	181	7	188	369	193	936·54
* Average of 10 years, 1881–90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for the six in that for

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SIONS into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY the Ratios per 1,000 of the Strength and the Average Ratios for 10 Years.*

Ratio per 1,000.					† Average Ratio per 1,000 from 1886 to 1890.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
·1	—	—	—	—	1·3	·08	—	—	·11
·1	—	—	—	·02	·5	·02	—	—	·04
16·0	5·58	·08	—	1·85	13·1	3·88	·03	—	1·66
59·9	·08	—	—	2·57	80·6	·10	·05	—	3·18
—	—	—	—	—	—	—	—	—	—
4·2	2·59	—	—	·11	1·4	1·05	—	—	·02
25·2	·47	·71	·08	1·37	21·1	·73	·92	·22	1·40
2·6	·08	—	—	·06	4·3	—	—	—	·09
108·1	8·80	·79	·08	5·98	122·5	5·86	1·00	·22	6·50
364·5	·16	2·99	·47	10·72	320·6	·45	1·15	·08	9·64
·7	—	—	—	·04	·9	·08	·02	—	·04
148·0	—	·08	—	11·64	133·0	—	—	—	10·37
52·3	·08	1·81	1·26	4·43	41·3	·03	1·97	·90	3·63
154·3	—	—	—	10·98	169·1	—	·20	·05	11·44
354·6	·08	1·89	1·26	27·01	343·4	·03	2·17	·95	25·44
—	—	—	—	—	—	·03	—	—	—
3·5	—	—	—	·11	4·4	—	·05	—	·14
·5	—	·08	—	·02	1·1	—	·05	—	·06
5·7	—	—	—	·11	8·7	·20	·02	—	·23
36·2	—	6·13	2·04	1·98	30·3	·02	5·08	1·84	1·85
23·7	·08	1·02	·39	1·57	25·3	·07	1·07	·33	1·67
5·0	·71	1·65	·86	·61	3·9	·89	1·59	1·19	·57
13·1	·16	·71	·23	·67	15·1	·15	·82	·17	·92
9·5	·31	1·81	1·18	·71	10·6	·32	1·22	·80	·62
3·1	—	1·18	1·57	·35	3·6	—	1·25	1·40	·43
13·7	—	·47	·23	·72	15·2	—	·97	·88	·96
14·9	—	1·34	·63	·75	14·9	—	1·30	·87	·81
12·8	·16	2·51	2·67	·96	13·7	.35	3·15	2·04	1·29
30·7	·63	·79	·55	1·41	28·1	·70	1·05	·57	1·76
123·9	1·10	1·57	·86	4·49	129·2	1·62	2·37	·38	5·23
34·6	—	·39	·31	3·49	29·8	·03	·27	·17	2·85
2·2	·16	·31	·23	·16	2·0	·15	·33	·20	·20
46·7	—	·47	·16	2·99	61·0	·03	·33	·25	3·47
7·3	—	·94	·47	·54	6·3	·03	·77	·57	·55
17·4	—	·16	—	·82	18·4	—	·03	·02	·78
60·4	—	·23	·08	2·46	70·8	—	·22	·02	2·91
1·0	·08	—	—	·02	·5	·05	—	—	·02
3·0	2·12	·16	·08	·16	2·4	1·35	·10	·05	·12
106·8	·23	1·41	·79	4·71	105·6	·70	·95	·65	4·30
—	—	—	—	—	—	—	—	·13	—
1·5	—	—	—	·04	1·4	—	—	—	·07
—	—	—	—	—	—	—	—	—	—
1407·1	14·78	29·00	15·17	73·60	1389·7	13·13	27·32	14·08	73·42
1413·2	14·79	31·83	13·58	68·72	—	—	—	—	—

years, 1886 to 1891, will be given in the Report for 1892; those for the seven years, 1886 to 1892, 1893, &c., &c.

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ABSTRACT No. XXX.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL in each of the MILITARY DISTRICTS in the BOMBAY COMMAND,

Military Districts.	Bombay, Deesa, & Aden.		Poona.		Mhow.		Nag-pur.		Sind.		Troops moving.		Total.	
Average Strength	3,238		3,841		2,986		1,007		1,533		119		12,724	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
I.—GENERAL DISEASES.														
GROUP "A."														
Sub-Group I. Small-pox	1	—	—	—	—	—	—	—	—	—	—	—	1	—
Other Eruptive Fevers	1	—	1	—	—	—	—	—	—	—	—	—	2	—
Enteric Fever	16	4	77	24	99	37	7	4	5	2	—	—	204	71
Other Continued Fevers	235	—	184	—	43	—	150	1	83	—	7	—	762	1
Yellow Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cholera	4	3	9	6	35	23	4	—	1	1	—	—	53	33
Dysentery	75	1	98	1	92	3	13	1	43	—	—	—	321	6
Other Diseases	24	1	9	—	—	—	—	—	—	—	—	—	33	1
Total	416	9	378	31	269	63	174	6	132	3	7	—	1,376	112
Sub-Group II.—Malarial Fevers	1,417	1	727	—	1,040	—	713	—	725	—	16	—	4,638	1
Sub-Group III.—Septic Diseases	1	—	5	—	2	—	—	—	1	—	—	—	9	—
Sub-Group IV. Syphilis, Primary	547	—	829	—	102	—	181	—	223	—	2	—	1,883	—
" Secondary	240	—	197	—	90	—	55	—	80	—	3	—	665	—
Gonorrhœa	460	—	659	—	509	—	181	—	153	—	2	—	1,964	—
Total	1,247	—	1,685	—	701	—	417	—	455	—	7	—	4,512	—
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
GROUP "B."														
Sub-Group I.—Parasitic Diseases	18	—	12	—	12	—	2	—	1	—	—	—	45	—
Sub-Group II. Scurvy	4	—	—	—	2	—	—	—	1	—	—	—	7	—
Alcoholism	34	—	6	—	10	—	9	—	13	—	—	—	72	—
GROUP "C."														
Debility, &c.	194	—	89	—	62	—	45	—	68	—	2	—	460	—
GROUP "D."														
Rheumatism	83	—	62	—	94	1	22	—	39	—	1	—	301	1
Tubercular Diseases	36	3	6	2	14	1	1	—	6	1	—	—	63	7
Other Diseases	47	—	39	—	31	—	40	—	10	—	—	—	167	—
II.—LOCAL DISEASES.														
Diseases of the—														
1. Nervous System Nervous Diseases	44	—	16	2	32	2	5	—	24	—	—	—	121	4
Mental "	26	—	4	—	3	—	1	—	6	—	—	—	40	—
2. Eye	53	—	50	—	27	—	17	—	27	—	—	—	174	—
3 & 4. Other Organs of Special Senses	45	—	30	—	38	—	26	—	51	—	—	—	190	—
5. Circulatory System	50	1	27	—	28	1	23	—	35	—	—	—	163	2
6. Respiratory "	81	4	98	—	106	2	21	2	83	—	1	—	390	8
7. Digestive "	351	3	475	5	458	3	131	1	158	1	3	—	1,576	13
8. Lymphatic and Glandular System	140	—	125	—	87	—	35	—	53	—	—	—	440	—
9. Urinary System	11	1	5	—	10	1	—	—	2	—	--	--	28	2
10. Generative "	212	—	69	—	287	—	22	—	28	—	2	—	620	—
11. Organs of Locomotion	31	—	32	—	18	—	2	—	10	—	—	—	93	—
12. Connective Tissues	63	—	77	—	42	—	25	—	13	—	2	—	222	—
13. Skin	235	—	165	—	192	—	61	—	114	—	1	—	768	—
III.—POISONS	10	1	—	—	2	—	—	—	1	—	—	—	13	1
IV.—INJURIES.														
1. General	13	5	5	2	11	5	6	13	3	2	—	—	38	27
2. Local	402	1	338	—	290	1	110	1	218	—	1	—	1,359	3
3. In Action	—	—	—	—	—	—	—	—	—	—	—	—	—	—
No appreciable disease	3	—	2	—	4	—	5	—	5	—	—	—	19	—
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Total	5,267	29	4,527	42	3,872	80	1,913	23	2,282	7	43	—	17,904	181

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OFFICER showing the PREVALENCE and MORTALITY of the Different Classes of DISEASE with the Ratios per 1,000 of Strength during the Year 1891.

Bombay, Deesa, and Aden.		Poona.		Mhow.		Nagpur.		Sind.		Marching.		Total.	
Ratio per 1,000 of Strength.													
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
·3	—	—	—	—	—	—	—	—	—	—	—	·1	—
·3	—	·3	—	—	—	—	—	—	—	—	—	·1	—
4·9	1·23	20·0	6·25	33·1	12·39	6·9	3·97	3·3	1·30	—	—	16·0	5·58
91·1	—	47·9	—	14·4	—	148·9	·99	54·1	—	58·8	—	59·9	·08
—	—	—	—	—	—	—	—	—	—	—	—	—	—
1·2	·93	2·3	1·56	11·7	7·70	4·0	—	·6	·65	—	—	4·2	2·59
23·2	·31	25·5	·26	30·8	1·00	12·9	·99	28·0	—	—	—	25·2	·47
7·4	·31	2·3	—	—	—	—	—	—	—	—	—	2·6	·08
128·4	2·78	98·4	8·07	90·1	21·09	172·8	5·96	86·1	1·96	58·8	—	108·1	8·80
437·6	·31	189·2	—	348·2	—	708·0	—	472·9	—	134·4	—	364·5	·08
·3	—	1·3	—	·7	—	—	—	·6	—	—	—	·7	—
168·9	—	215·8	—	34·1	—	179·7	—	144·8	—	16·8	—	148·0	—
74·1	—	51·3	—	30·1	—	54·6	—	52·1	—	25·2	—	52·3	—
142·0	—	171·5	—	170·4	—	179·7	—	99·8	—	16·8	—	154·3	—
385·1	—	438·6	—	234·7	—	414·1	—	296·8	—	58·8	—	354·6	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
5·5	—	3·1	—	4·0	—	2·0	—	·6	—	—	—	3·5	—
1·2	—	—	—	·7	—	—	—	·6	—	—	—	·5	—
10·5	—	1·6	—	3·3	—	8·9	—	8·5	—	—	—	5·7	—
59·9	—	23·2	—	20·7	—	44·7	—	44·3	—	16·8	—	36·2	—
25·6	—	16·1	—	31·5	·33	21·8	—	25·4	—	8·4	—	23·7	·08
11·1	·93	1·6	·52	4·7	·33	1·0	—	3·9	·65	—	—	5·0	·55
14·5	—	10·1	—	10·4	—	39·7	—	6·5	—	—	—	13·1	—
13·6	—	4·3	·52	10·7	·67	5·0	—	15·6	—	—	—	9·5	·31
8·0	—	1·0	—	1·0	—	1·0	—	3·9	—	—	—	3·1	—
16·4	—	13·5	—	9·0	—	16·9	—	17·6	—	—	—	13·7	—
13·9	—	7·8	—	12·7	—	25·8	—	33·3	—	—	—	14·9	—
15·4	·31	7·0	—	9·4	·33	23·8	—	22·8	—	—	—	12·8	·16
25·0	1·23	25·5	—	35·5	·67	20·8	1·99	54·1	—	8·4	—	30·7	·63
108·4	·93	123·6	1·30	153·3	1·00	130·1	·99	103·1	·65	25·2	—	123·9	1·02
43·2	—	32·5	—	29·1	—	34·7	—	34·6	—	—	—	34·6	—
3·4	·31	1·3	—	3·3	·33	—	—	1·3	—	—	—	2·2	·16
65·5	—	18·0	—	96·1	—	21·8	—	18·3	—	16·8	—	48·7	—
9·6	—	8·3	—	6·0	—	2·0	—	6·5	—	—	—	7·3	—
19·4	—	20·0	—	14·1	—	24·8	—	8·5	—	16·8	—	17·4	—
72·5	—	42·9	—	64·3	—	60·6	—	74·4	—	8·4	—	60·4	—
3·1	·31	—	—	·7	—	—	—	·6	—	—	—	1·0	·08
4·0	1·54	1·3	·52	3·7	1·67	5·9	12·90	1·9	1·30	—	—	3·0	2·12
124·1	·31	88·0	—	97·1	·33	109·2	·99	142·2	—	8·4	—	106·8	·23
—	—	—	—	—	—	—	—	—	—	—	—	—	—
·9	—	·5	—	1·3	—	5·0	—	3·3	—	—	—	1·5	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—
1626·4	8·95	1178·4	10·93	1296·3	26·78	1899·6	22·84	1488·5	4·57	361·3	—	1407·1	14·23

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ABSTRACT No. XXXI.—The following TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER shows the ADMISSIONS and DEATHS which took place in the PRINCIPAL STATIONS in the BOMBAY COMMAND during the Year 1891.

Divisions and Districts.	Stations.	Annual Average Strength.	Number of Admissions.	Number of Deaths.	Ratio per 1,000 of the Strength.			
					Admissions.	Deaths.	Average of 10 Years, 1881–90. Admissions.	Deaths.
Bombay	Colaba	941	1,623	5	1724·8	5·31	1304·7	11·70
	Butcher's Island	11	16	—	1454·5	—	—	—
	Deolalee	785	1,031	9	1313·4	11·46	1159·2	18·16
	Ahmedabad	234	449	6	1918·8	25·64	1786·9	13·97
	Deesa	303	274	—	904·3	—	1523·9	11·13
	Aden	821	1,733	9	2110·8	10·96	1125·4	12·83
Poona	Poona	2,030	2,543	31	1252·7	15·27	1139·8	8·49
	Kirkee	827	749	4	905·7	4·84	1138·8	6·54
	Ahmednagar	678	811	5	1196·2	7·37	1622·2	11·70
	Satara	200	257	—	1285·0	—	1505·8	5·75
Mhow	Mhow	1,653	2,066	15	1249·8	9·07	1599·5	11·56
	Nasirabad (including Jewassa).	676	1,005	37	1486·7	54·78	1584·3	17·37
	Neemuch	501	569	23	1135·7	45·91	1651·3	18·00
	Indore	115	154	1	1339·1	8·69	1870·8	19·91
	Khundwa	2	—	—	—	—	—	—
Nagpur	Kamptee	889	1,736	15	1952·7	16·87	*1634·2	*13·24
	Sitabuldi	54	98	—	1814·8	—	*1843·6	*28·37
Sind	Karachi	1,105	1,690	4	1529·4	3·62	1801·6	15·64
	Hyderabad	428	592	3	1383·2	7·01	1598·7	7·68
	Sanitaria	352	465	14	1321·0	39·77	1790·1	13·96
	On the march	119	43	—	361·3	—	647·4	17·40
	Total	12724	17904	181	1407·1	12·23	—	—

* For two years only.

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ABSTRACT No. XXXII.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the STATIONS in the BOMBAY COMMAND at which the ADMISSIONS and DEATHS from ENTERIC FEVER took place in each of the Four Quarters of the Year 1891.

Divisions and Districts.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Bombay, Deesa, and Aden	Colaba	2	—	—	—	—	—	—	—	2	—
	Deolalee	—	—	1	—	1	1	2	1	4	2
	Ahmedabad	—	—	3	—	2	—	1	1	6	1
	Deesa	2	—	1	—	—	—	—	—	3	—
	Aden	—	—	1	1	—	—	—	—	1	1
Poona	Poona	13	2	4	3	13	5	9	4	39	14
	Kirkee	2	1	2	—	7	1	3	1	14	3
	Ahmednagar	—	—	10	2	10	2	1	1	21	5
	Purandhar	—	—	—	—	—	—	3	2	3	2
Mhow	Mhow	5	2	9	3	15	1	9	4	38	10
	Nasirabad (including Jervasa).	3	—	9	3	6	1	19	6	37	10
	Neemuch	—	—	1	—	5	3	15	10	21	13
	Indore	—	—	—	—	1	1	—	—	1	1
	Taragarh	—	—	—	1	2	1	—	1	2	3
Nagpur	Kamptee	—	—	1	1	3	3	2	—	6	4
	Chikalda	1	—	—	—	—	—	—	—	1	—
Sind	Karachi	3	—	1	1	—	—	1	1	5	2
	Total	31	5	43	15	65	19	65	32	204	71

ABSTRACT No. XXXIII.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the STATIONS in the BOMBAY COMMAND at which the ADMISSIONS and DEATHS from CHOLERA took place in each of the Four Quarters of the Year 1891.

Divisions and Districts.	Stations.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Bombay	Deolalee	1	1	3	2	—	—	—	—	4	3
Poona	Poona	—	—	—	—	9	6	—	—	9	6
Mhow	Mhow	—	—	—	—	1	—	—	—	1	—
	Nasirabad	—	—	—	—	29	20	—	—	29	20
	Neemuch	—	—	—	—	5	3	—	—	5	3
Nagpur	Chikalda	—	—	—	—	4	—	—	—	4	—
Sind	Hydrabad	—	—	1	1	—	—	—	—	1	1
	Total	1	1	4	3	48	29	—	—	53	33

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ABSTRACT No. XXXIV.—Table taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the PREVALENCE of DYSENTERY, DIARRHŒA, HEPATITIS, and ABSCESS OF LIVER in each DISTRICT in the BOMBAY COMMAND for the Year 1891.

Districts.	Bombay, Deesa, and Aden.		Poona.		Mhow.		Nagpur.		Sind.		On the March.		Total.	
Strength.	3,238		3,841		3,986		1,007		1,533		119		12,724	
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
Dysentery - -	75	1	98	1	92	3	18	1	43	—	—	—	321	6
Diarrhœa - -	104	—	143	2	181	—	29	—	41	—	1	—	499	2
Hepatitis and Abscess of Liver.	40	3	40	4	45	1	10	—	8	1	—	—	143	9
Total -	219	4	281	7	318	4	52	1	92	1	1	—	963	17
Ratio per 1,000 of Mean Strength.														
Dysentery - -	23·2	·31	25·5	·26	30·8	1·00	12·9	·99	28·0	—	—	—	25·2	·47
Diarrhœa - -	32·1	—	37·2	·52	60·6	—	28·8	—	26·7	—	8·4	—	39·2	·16
Hepatitis and Abscess of Liver.	12·3	·93	10·4	1·04	15·1	·33	9·9	—	5·2	·65	—	—	11·2	·71
Total -	67·6	1·23	73·1	1·82	106·5	1·34	51·6	·99	60·0	·65	8·4	—	75·7	1·34

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ABSTRACT No. XXXV.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER showing the PREVALENCE and MORTALITY in the BOMBAY COMMAND, due to DYSENTERY, DIARRHŒA, HEPATITIS, and ABSCESS OF LIVER in each Quarter of the Year 1891.

Quarter.	Strength.	Dysentery.				Diarrhœa.				Hepatitis and Abscess of Liver.				Total.			
		Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.		Number.		Ratio per 1,000 of the Strength.	
		Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
1st Quarter -	13,033	67	1	5·1	·08	73	—	5·6	—	34	2	2·6	·15	174	3	13·3	·23
2nd „ -	12,733	49	2	3·8	·16	81	—	6·4	—	41	2	3·2	·16	171	4	13·4	·31
3rd „ -	12,326	115	2	9·3	·16	209	2	16·9	·16	23	2	1·9	·16	347	6	28·1	·49
4th „ -	12,813	90	1	7·0	·08	136	—	10·6	—	45	3	3·5	·23	271	4	21·1	·31
Total - -	12,724	321	6	25·2	·47	499	2	39·2	·16	143	9	11·2	·71	963	17	75·7	1·34

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ABSTRACT No. XXXVI.—TABLE showing the AVERAGE STRENGTH, SICK among the TROOPS stationed in EGYPT during the Year 1891, with

Average Strength, 3,172. Diseases.	Admissions into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids. Number sent Home.	Invalids. Number finally Discharged the Service.	Average Number constantly Sick.
I.—GENERAL DISEASES.							
GROUP "A."							
Sub-Group I. Small-pox	1	—	—	—	—	—	·39
Sub-Group I. Other Eruptive Fevers	7	—	—	—	—	—	·40
Sub-Group I. Enteric Fever	40	9	—	9	8	—	7·91
Sub-Group I. Other Continued Fevers	320	1	—	1	4	—	11·18
Sub-Group I. Yellow Fever	—	—	—	—	—	—	—
Sub-Group I. Cholera	—	—	—	—	—	—	—
Sub-Group I. Dysentery	66	1	—	1	1	1	5·06
Sub-Group I. Other Diseases	1	—	—	—	—	—	·02
Sub-Group I. Total	435	11	—	11	13	1	24·96
Sub-Group II.—Malarial Fevers	69	—	—	—	—	1	1·69
Sub-Group III.—Septic Diseases	—	—	—	—	—	—	—
Sub-Group IV. Syphilis, Primary	216	—	—	—	—	—	16·10
Sub-Group IV. " Secondary	170	—	—	—	4	3	12·96
Sub-Group IV. Gonorrhœa	360	—	—	—	1	—	25·36
Sub-Group IV. Total	746	—	—	—	5	3	54·42
Sub-Group V.—Hydrophobia, &c.	—	—	—	—	—	—	—
GROUP "B."							
Sub-Group I.—Parasitic Diseases	23	—	—	—	—	—	·61
Sub-Group II. Scurvy	—	—	—	—	—	—	—
Sub-Group II. Alcoholism	15	—	—	—	—	—	·45
GROUP "C."							
Debility, &c.	39	—	—	—	4	6	3·38
GROUP "D."							
Rheumatism	101	—	—	—	5	1	7·88
Tubercular Diseases	3	1	—	1	2	2	·57
Other Diseases	30	—	—	—	1	—	1·63
II.—LOCAL DISEASES.							
Diseases of the— 1. Nervous System (Nervous Diseases)	37	—	—	—	4	3	2·33
1. Nervous System (Mental ")	3	—	—	—	1	3	·53
2. Eye	73	—	—	—	1	2	3·66
3 & 4. Other Organs of Special Senses	48	—	—	—	4	4	3·14
5. Circulatory System	34	—	—	—	8	12	4·39
6. Respiratory "	96	3	1	4	3	2	5·79
7. Digestive "	401	1	—	1	9	6	14·69
8. Lymphatic and Glandular System	36	—	—	—	2	1	3·63
9. Urinary System	4	—	1	1	—	1	·18
10. Generative "	333	—	—	—	3	3	24·39
11. Organs of Locomotion	34	—	—	—	—	1	1·66
12. Connective Tissue	83	—	—	—	1	—	4·08
13. Skin	197	—	—	—	—	—	7·47
III.—POISONS	2	—	—	—	—	—	·04
IV.—INJURIES.							
1. General	—	3	—	3	—	—	—
2. Local	298	2	—	2	5	3	13·60
3. In Action	—	—	—	—	—	—	—
No appreciable disease	2	—	—	—	—	—	·05
Cause unknown (refers to deaths only)	—	—	—	—	—	—	—
General Total	3,141	21	2	23	71	55	185·47
* Average of 8 years, 1883–90	—	—	—	—	—	—	—

† The average ratios for 10 years will be given in future years. The average ratios for the six in that

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ADMISSIONS into HOSPITAL, DEATHS, NUMBERS INVALIDED and CONSTANTLY the Ratios per 1,000 of the Strength, and the Average Ratios for 10 Years.*

Ratio per 1,000.					† Average Ratio per 1,000 from 1886 to 1890.				
Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.	Admissions.	Deaths.	Invalids sent Home.	Invalids finally Discharged.	Constantly Sick.
·3	—	—	—	·12	5·1	·64	—	—	·52
2·2	—	—	—	·13	1·7	—	—	—	·96
12·6	2·84	2·52	—	2·49	47·4	12·73	12·80	·04	7·02
100·9	·31	1·26	—	3·52	151·5	—	2·39	—	5·46
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
20·8	·31	·31	·31	1·60	54·0	2·09	4·48	·30	4·16
·3	—	—	—	·01	3·6	·04	—	—	·12
137·1	3·47	4·10	·31	7·87	263·3	15·50	19·68	·34	18·24
21·8	—	—	·31	·53	11·8	—	·38	·04	·58
—	—	—	—	—	2·0	·15	·08	—	·12
68·1	—	—	—	5·08	67·8	—	·15	—	5·42
53·6	—	1·26	·95	4·09	27·6	—	·87	·45	2·33
113·5	—	·31	—	7·99	98·3	—	·08	—	5·90
235·2	—	1·58	·95	17·16	193·7	—	1·10	·45	13·64
—	—	—	—	—	—	—	—	—	—
7·3	—	—	—	·19	4·2	·04	—	—	·10
—	—	—	—	—	·1	—	—	—	·01
4·7	—	—	—	·14	6·8	·08	·04	—	·23
12·3	—	1·26	1·89	1·07	34·3	—	6·65	2·85	2·12
31·8	—	1·58	·31	2·49	23·8	·23	1·48	·30	1·60
·9	·31	·63	·63	·18	3·5	·76	2·43	1·82	·74
9·5	—	·31	—	·51	10·2	·04	·23	·11	·59
11·7	—	1·26	·95	·73	7·3	·45	1·41	1·18	·48
·9	—	·31	·95	·18	1·7	·04	1·56	2·01	·29
23·0	—	·31	·63	1·15	51·7	—	·99	·49	2·03
15·1	—	1·26	1·26	·99	18·8	—	·61	·61	·68
10·7	—	2·52	3·78	1·38	15·5	·30	4·90	4·86	1·57
30·3	1·26	·95	·63	1·83	31·8	·95	1·56	·99	2·24
126·4	·31	2·84	1·89	4·63	157·0	1·78	3·38	·95	6·24
11·3	—	·63	·31	1·14	23·4	—	·53	·15	2·75
1·3	·31	—	·31	·06	2·0	·04	·26	·19	·14
104·7	—	·95	·95	7·09	85·5	—	·26	·26	5·67
10·7	—	—	·31	·52	6·4	—	·49	·87	·45
26·2	—	·31	—	1·29	27·3	—	·30	·08	1·32
62·1	—	—	—	2·36	55·5	—	·26	—	2·58
·6	—	—	—	·01	·4	·15	—	—	—
—	·95	—	—	—	3·4	1·97	·23	·04	·20
94·0	·63	1·58	·95	4·35	91·0	·99	1·22	·72	4·19
—	—	—	—	—	—	·08	·30	·23	·10
·6	—	—	—	·02	3·8	—	—	—	·12
—	—	—	—	—	—	—	—	—	—
990·2	7·25	22·38	17·33	58·47	1131·2	23·55	50·34	19·26	68·97
1224·4	28·90	75·10	26·27	73·25	—	—	—	—	—

years, 1886 to 1891 will be given in the Report for 1892; those for the seven years 1886 to 1892 for 1893. &c &c.

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ABSTRACT No. XXXVII.—TABLE showing the AVERAGE STRENGTH, SHIP proceeding on and returning from Foreign Service, and proceeding Strength during the Year 1891.

Strength of W.O., N.C.O., and Men:	Passage Out.		Passage Home.	
Embarked	19,377		17,329	
Average Annual Strength	1,330		1,272	
	Admitted.	Died.	Admitted.	Died.
I.—GENERAL DISEASES.				
GROUP "A."				
Sub-Group I. Small-pox	—	—	—	—
Other Eruptive Fevers	1	—	—	—
Enteric Fever	1	1	1	1
Other Continued Fevers	20	—	33	—
Yellow Fever	—	—	—	—
Cholera	—	—	—	—
Dysentery	1	—	16	2
Other Diseases	1	—	65	—
Total	24	1	115	3
Sub-Group II.—Malarial Fevers	—	—	108	—
Sub-Group III.—Septic Diseases	3	—	1	—
Sub-Group IV. Syphilis, Primary	253	—	265	—
„ Secondary	63	—	75	—
Gonorrhœa	382	—	310	—
Total	698	—	650	—
Sub-Group V.—Hydrophobia, &c.	—	—	—	—
GROUP "B."				
Sub-Group I.—Parasitic Diseases	1	—	—	—
Sub-Group II. Scurvy	—	—	—	—
Alcoholism	2	1	1	1
GROUP "C."				
Debility, &c.	13	—	10	—
GROUP "D."				
Rheumatism	33	—	22	—
Tubercular Diseases	—	—	2	3
Other Diseases	29	—	6	—
II.—LOCAL DISEASES.				
Diseases of the—				
1. Nervous System Nervous Diseases	6	—	1	—
Mental „	3	—	3	—
2. Eye	16	—	4	—
3 & 4. Other Organs of Special Senses	10	—	1	—
5. Circulatory System	—	—	1	1
6. Respiratory „	112	2	103	6
7. Digestive „	137	—	72	1
8. Lymphatic and Glandular System	27	—	45	—
9. Urinary System	—	—	1	—
10. Generative „	124	—	97	—
11. Organs of Locomotion	7	—	6	—
12. Connective Tissue	51	—	27	—
13. Skin	170	—	49	—
III.—POISONS.	—	—	—	—
IV.—INJURIES.				
1. General	3	—	—	—
2. Local	178	2	46	—
3. In Action	—	—	—	—
No appreciable disease	—	—	1	—
Cause unknown (refers to deaths only)	—	—	—	—
General Total	1,647	6	1,372	15

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ADMISSIONS into HOSPITAL, and DEATHS among the TROOPS ON BOARD from one Colony or Station abroad to another, with the Ratio per 1,000 of the

Intercolonial.		Ratio per 1,000 of the Strength.					
7,016 286		Passage Out.		Passage Home.		Intercolonial.	
Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.
3	—	—	—	—	—	10·5	—
—	—	·7	—	—	—	—	—
—	—	·7	·72	·8	·79	—	—
11	—	14·5	—	25·9	—	38·4	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
4	—	·7	—	12·6	1·57	14·0	—
—	—	·7	—	51·1	—	—	—
18	—	17·3	·72	90·4	2·36	62·9	—
3	—	—	—	84·9	—	10·5	—
1	—	2·2	—	·8	—	3·5	—
89	—	183·3	—	208·3	—	311·2	—
14	—	45·7	—	59·0	—	48·9	—
82	—	276·8	—	243·7	—	286·7	—
185	—	505·8	—	511·0	—	646·8	—
—	—	—	—	—	—	—	—
—	—	·7	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	1·4	·72	·8	·79	—	—
7	—	9·4	—	7·9	—	24·5	—
10	—	23·9	—	17·3	—	35·0	—
1	1	—	—	1·6	2·36	3·5	3·50
4	—	21·0	—	4·7	—	14·0	—
1	1	4·3	—	·8	—	3·5	3·50
—	—	2·2	—	2·3	—	—	—
8	—	11·6	—	3·1	—	28·0	—
1	—	7·2	—	·8	—	3·5	—
—	—	—	—	·8	·79	—	—
30	—	81·2	1·45	81·0	4·72	104·9	—
24	—	99·3	—	56·6	·79	83·9	—
5	—	19·6	—	35·4	—	17·5	—
—	—	—	—	·8	—	—	—
21	—	89·9	—	76·2	—	73·4	—
2	—	5·1	—	4·7	—	7·0	—
16	—	37·0	—	21·2	—	55·9	—
27	—	123·2	—	38·5	—	94·4	—
—	—	—	—	—	—	—	—
—	—	2·2	—	—	—	—	—
27	—	129·0	1·45	36·2	—	94·4	—
—	—	—	—	—	—	—	—
9	—	—	—	·8	—	31·5	—
—	—	—	—	—	—	—	—
400	2	1193·5	4·34	1078·6	11·79	1398·6	6·99

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ABSTRACT No. XXXVIII.—On the Influence of Age on the Mortality.—Table showing the Death Rates of the Warrant Officers, Non-commissioned Officers and Men, at the several Ages, arranged by quinquennial Periods, in the several Foreign Commands.

Commands.	Under 20 Years.				20 and under 25.				25 and under 30.				30 and under 35.				35 and under 40.				40 and upwards.			
	Strength.	Died.	Ratio per 1,000.		Strength.	Died.	Ratio per 1,000.		Strength.	Died.	Ratio per 1,000.		Strength.	Died.	Ratio per 1,000.		Strength.	Died.	Ratio per 1,000.		Strength.	Died.	Ratio per 1,000.	
			1891.	1881-90.			1891.	1881-90.			1891.	1881-90.			1891.	1881-90.			1891.	1881-90.			1891.	1881-90.
Gibraltar	429	—	—	4·30	2,242	11	4·91	4·56	1,517	4	2·64	5·92	357	1	2·80	8·47	93	2	21·50	7·32	44	—	—	24·86
Malta	673	4	5·94	6·77	3,955	25	6·32	8·07	2,483	16	6·44	7·29	420	1	2·38	8·67	128	—	—	14·44	38	1	26·32	15·05
Cyprus	111	—	—	5·46	265	1	3·77	10·54	132	1	7·57	4·64	29	—	—	18·78	12	—	—	36·46	5	—	—	—
Egypt	250	1	4·00	14·16*	1,428	10	6·86	26·10*	1,190	9	7·56	18·17*	207	—	—	16·63*	49	1	20·41	19·10*	18	—	—	44·39*
Canada	40	1	25·00	1·73	931	3	3·22	2·80	342	1	2·92	4·49	65	—	—	7·44	24	2	83·33	17·70	22	—	—	12·39
Bermuda	99	—	—	7·30	974	5	5·13	8·59	367	—	—	10·51	115	—	—	10·56	35	—	—	13·75	11	—	—	45·45
West Indies	55	1	18·18	6·92	450	7	15·25	13·61	462	5	10·82	15·73	85	—	—	13·58	26	2	76·92	22·22	9	—	—	37·97
South Africa and St. Helena	153	2	13·07	6·58†	1,510	14	9·27	7·42†	1,147	10	8·72	7·00†	250	2	8·00	8·33†	96	—	—	7·67†	29	—	—	16·17†
Mauritius	22	2	90·91	—	302	6	19·87	12·38	227	3	13·22	17·23	19	2	105·26	16·22	8	1	125·00	22·47	2	—	—	30·30
Ceylon	25	—	—	6·15	692	7	10·12	10·30	432	6	13·89	13·99	67	1	14·92	15·30	29	—	—	13·60	6	—	—	21·05
China	42	—	—	—	706	6	8·50	7·83‡	472	3	6·35	11·77‡	83	1	12·05	16·60‡	24	—	—	14·28‡	7	2	28·57	—
Straits Settlements	20	—	—	2·57‡	723	4	5·53	6·35‡	419	—	—	6·60‡	88	—	—	5·96‡	18	1	55·55	8·81‡	2	—	—	25·64‡
India	1,716	18	10·49	8·83	31,308	588	18·78	15·57	24,285	337	13·88	13·75	5,665	70	12·36	15·14	1,675	24	14·33	16·04	426	13	30·52	21·58

* For eight years only (1883 to 1890). † For nine years only (1882 to 1890). ‡ For six years only (1885 to 1890).

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ABSTRACT No. XXXIX.—TABLE showing the various CORPS which served in the UNITED KINGDOM during the Year 1891, and some of the most important of their HEALTH STATISTICS.

Battery or Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Constantly Sick.	Ratio per 1,000 of Mean Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.	Average Time to each Soldier.			
											days.	days.		
	HOUSEHOLD CAVALRY.													
1st	Life Guards	403	356	--	4	13·90	883·4	—	9·92	34·49	12·59	14·25	London, 12 months. Detachment at Aldershot.	75
2nd	Life Guards	429	265	4	8	12·05	617·7	9·32	18·65	28·09	10·25	16·60	London, 3 months; Windsor, 9 months. Detachment at Aldershot.	75
	Royal Horse Guards	399	243	—	4	11·90	609·0	—	10·02	29·82	10·88	17·87	London, 9 months; Windsor, 3 months. Detachment at Aldershot.	75
	Household Cavalry detached	2	1	—	—	·02	—	—	—	—	—	—		—
	Total Household Cavalry	1,233	865	4	16	37·87	701·5	3·24	12·98	30·71	11·24	15·98		
	CAVALRY.													
4th	Dragoon Guards	583	456	1	8	29·59	782·2	1·71	13·72	50·75	18·52	23·68	Dublin, 5 months; Aldershot, 7 months. Detachment at Curragh.	9
5th	Dragoon Guards	655	451	2	13	32·36	688·5	3·05	19·85	49·40	18·03	26·19	Aldershot, 12 months	35
6th	Dragoon Guards	374	361	1	4	16·30	965·2	2·67	10·69	43·59	15·91	16·49	Leeds, 5½ months; Piershill, 6½ months. Detachment at Birmingham.	3
1st	Royal Dragoons	568	354	1	18	20·49	623·2	1·76	31·69	36·07	13·17	21·12	Colchester, 7½ months; York, 4½ months.	35
2nd	Royal Dragoons	613	430	4	2	26·02	701·4	6·52	3·26	42·45	15·49	22·09	Curragh, 12 months	35
3rd	Hussars	561	536	2	9	29·60	955·4	3·56	16·04	52·76	19·26	20·15	Ballincollig, 6 months; Dublin, 4 months; Curragh, 2 months.	12

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Battery or Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Constantly Sick.	Ratio per 1,000 of Mean Strength.				Sick each		Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.	Average Time to Soldier.	Average Duration of each Case of Sickness.		
	CAVALRY—*cont.*										days.	days.		
4th	Hussars - - - -	618	701	2	18	52·76	1134·3	3·23	29·12	85·37	31·16	27·47	Colchester, 4 months; Dublin, 8 months.	13
6th	Dragoons - - - -	386	477	—	7	26·16	1235·7	—	18·13	67·77	24·74	20·02	Brighton, 12 months. Detachment at Hilsea.	1
8th	Hussars - - - -	371	404	1	8	18·61	1088·9	2·70	21·56	50·16	18·31	16·81	Norwich, 12 months - -	2
9th	Lancers - - - -	574	351	4	11	19·12	611·5	6·97	19·16	33·31	12·16	19·88	Dundalk, 12 months. Detachments at Belfast and Belturbet.	6
10th	Hussars - - - -	470	271	3	5	13·67	576·6	6·38	10·64	29·08	10·61	18·41	York, 7 months; Dublin, 3½ months; Curragh, 1½ months.	7
11th	Hussars - - - -	—	1	—	—	·04	—	—	—	—	—	—	——	—
12th	Lancers - - - -	392	366	3	5	20·45	933·7	7·65	12·75	52·17	19·04	20·39	Manchester, 12 months. Detachment at Liverpool (Seaforth).	4
13th	Hussars - - - -	371	217	4	6	9·59	584·9	10·78	16·17	25·85	9·43	16·13	Piershill, 6 months; Ballincollig, 4 months; Curragh, 2 months.	6
14th	Hussars - - - -	387	372	1	—	21·30	961·2	2·58	—	55·04	20·09	20·89	Leeds, 6½ months; Hounslow, 5½ months. Detachments, Birmingham and Aldershot.	5
15th	Hussars - - - -	464	261	1	3	10·84	562·5	2·16	6·47	23·36	8·53	15·16	Cahir, 12 months - - -	10
17th	Lancers - - - -	448	331	2	8	18·12	738·8	4·46	17·86	40·45	14·76	19·98	Shorncliffe, 5½ months; Hounslow, 6½ months.	1
19th	Hussars - - - -	472	270	—	9	19·10	572·0	—	19·07	40·46	14·77	25·82	Shorncliffe, 1 month; Aldershot, 6½ months. To India.	5
20th	Hussars - - - -	637	629	3	14	37·27	987·4	4·71	21·98	58·51	21·85	21·63	Aldershot, 12 months - - -	4

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Battery or Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.				
											days.	days.		
	CAVALRY—*cont.*													
	Cavalry Depôt - - -	1,478	1,489	7	30	64·45	1007·4	4·74	20·30	43·61	15·92	15·80	Canterbury, 12 months - - -	Since formation.
	Other Corps - - - -	157	72	—	11	11·45	458·6	—	70·06	72·93	26·62	58·04		—
	Total Cavalry of the Line -	10,579	8,800	42	189	497·29	831·8	3·97	17·86	47·01	17·16	20·62		
	ROYAL ARTILLERY.													
D	Horse Artillery - - -	130	68	1	1	8·33	523·1	7·69	7·69	25·61	9·35	17·87	Aldershot, 12 months. Detachment at Okehampton.	3
E	Horse Artillery - - -	114	78	—	1	4·68	684·2	—	8·78	41·06	14·98	21·91	Curragh, 12 months - - -	2
F	Horse Artillery - - -	141	92	1	2	5·36	652·5	7·09	14·18	38·01	13·87	21·26	Woolwich, 12 months. Detachment at Aldershot.	10
G	Horse Artillery - - -	117	98	—	1	3·44	837·6	—	8·55	29·40	10·73	12·78	Dorchester, 10 months; Aldershot, 2 months. Detachment at Okehampton.	2
I	Horse Artillery - - -	153	90	—	2	4·89	588·2	—	13·07	31·96	11·66	19·83	Aldershot, 12 months. Detachment at Okehampton.	9
J	Horse Artillery - - -	162	99	—	—	5·48	611·1	—	—	33·83	12·35	20·20	St. John's Wood, 3 months; Woolwich, 9 months. Detachment at Aldershot.	5
K	Horse Artillery - - -	110	85	—	1	4·42	772·7	—	9·09	40·18	14·67	18·98	Aldershot, 8¾ months. Detachment at Okehampton. To India.	—
L	Horse Artillery - - -	125	74	—	1	4·43	592·0	—	8·00	35·44	12·92	21·86	Woolwich, 12 months. Detachment at Aldershot.	8
O	Horse Artillery - - -	108	64	1	1	3·96	591·7	9·26	9·26	36·67	13·37	22·58	Curragh, 12 months - - -	2
P	Horse Artillery - - -	21	26	—	—	·96	1238·1	—	—	45·71	16·68	13·48	Dorchester, 2 months. Detachment at Aldershot. From India.	—

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							Admitted.	Died.	Invalided.	Average Constantly Sick.				
	ROYAL ARTILLERY—*cont.*										days.	days.		
A Depôt	Horse Artillery - -	262	166	—	3	12·11	633·6	—	11·45	46·22	16·87	26·63	Woolwich, 12 months - - -	permanent.
B Depôt	Horse Artillery - - -	218	252	—	6	8·73	1115·6	—	27·52	40·05	14·61	12·64	Woolwich, 12 months - - -	„
—	Riding Estalishment - - -	142	63	—	1	5·39	443·6	—	7·04	37·96	13·85	31·23	Woolwich, 12 months - - -	„
—	Remount Depôt - - -	45	9	—	—	·62	200·0	—	—	13·77	5·03	25·14	Woolwich, 12 months - - -	„
1st	Field Artillery - - - -	140	111	—	2	5·55	792·8	—	14·23	39·64	14·47	18·16	Sheffield, 9 months; Aldershot, 3 months. Detachment at Okehampton.	7
3rd	Field Artillery - - - -	137	79	1	—	3·81	576·6	7·30	—	27·81	10·15	17·60	Trowbridge, 9 months; Woolwich, 3 months. Detachments at Okehampton and Christchurch.	6
4th	Field Artillery - - - -	91	113	1	1	6·03	1241·6	10·99	10·99	66·26	24·18	19·48	Aldershot, 12 months - - -	1
6th	Field Artillery - - - -	103	76	—	4	3·63	737·8	—	38·83	35·24	12·86	17·43	Woolwich, 9 months. Detachment, Okehampton. To India.	2
7th	Field Artillery - - - -	98	54	1	—	2·86	551·0	10·20	—	29·18	10·65	19·33	Shorncliffe, 7½ months; Maryhill, 4½ months.	3
11th	Field Artillery - - - -	126	142	—	—	7·63	1127·0	—	—	60·55	22·10	19·70	Sheffield, 12 months. Detachment at Okehampton.	3
12th	Field Artillery - - - -	99	66	—	—	2·02	666·7	—	—	20·40	7·45	11·17	Sheffield, 7½ months; Glasgow, 5½ months.	4
13th	Field Artillery - - - -	134	202	—	2	12·08	1507·4	—	14·92	90·15	32·90	21·82	Hilsea, 12 months. Detachment at Christchurch.	5
14th	Field Artillery - - - -	138	94	—	2	4·72	681·1	—	14·49	34·20	12·48	18·32	Shorncliffe, 10 months; Aldershot, 2 months.	3
16th	Field Artillery - - - -	134	88	1	2	4·65	656·7	7·46	14·92	34·70	12·67	19·29	Newcastle-on-Tyne, 10 months; Weedon, 2 months.	7
18th	Field Artillery - - - -	102	95	—	3	5·50	931·4	—	29·41	53·92	19·68	21·13	Coventry, 2 months; Colchester, 10 months.	4

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							Admitted.	Died.	Invalided.	Average Constantly Sick.				
	ROYAL ARTILLERY—*cont.*										days.	days.		
23rd	Field Artillery - - -	107	102	—	5	5·78	953·3	—	46·72	54·01	19·71	20·68	Hilsea, 9 months. To India.	—
25th	Field Artillery - - -	148	140	1	2	8·30	1006·7	6·76	13·51	55·41	20·23	20·09	Ipswich, 12 months - -	5
26th	Field Artillery - - -	17	3	—	—	·25	176·5	—	—	14·70	5·87	30·42	Shorncliffe, 3 months. From India.	—
29th	Field Artillery - - -	156	44	1	2	2·32	293·1	6·41	12·82	14·87	5·43	19·35	Clonmel, 12 months - - -	8
30th	Field Artillery - - -	146	72	—	—	2·77	493·1	—	—	18·97	6·92	14·04	Weedon, 12 months - - -	6
32nd	Field Artillery - - -	154	88	1	2	6·35	571·4	6·49	12·99	41·23	15·04	26·34	Aldershot, 12 months - - -	10
33rd	Field Artillery - - -	109	97	—	—	4·45	889·9	—	—	40·83	14·90	16·74	Weedon, 8 months. To India.	—
37th	Field Artillery - - -	104	107	2	1	7·65	1028·8	19·23	9·61	73·55	26·84	26·00	Exeter, 11 months; Okehampton, 1 month.	1
38th	Field Artillery - - -	18	7	—	—	·33	388·9	—	—	18·78	4·66	11·00	Shorncliffe, 2 months. From India.	—
40th	Field Artillery - - -	167	128	—	3	6·37	777·1	—	19·11	40·57	14·81	19·06	Woolwich, 12 months. Detachment at Okehampton.	8
41st	Field Artillery - - -	133	93	—	1	4·57	699·2	—	7·52	34·36	13·54	17·94	Coventry, 10 months; Weedon, 2 months.	7
45th	Field Artillery - - -	145	133	3	—	6·63	917·2	20·69	—	46·72	16·69	18·19	Woolwich, 12 months. Detachment at Okehampton.	8
47th	Field Artillery - - -	129	116	1	3	6·78	899·2	7·75	23·26	52·56	19·18	21·33	Aldershot, 11 months. To India.	—
49th	Field Artillery - - -	109	63	—	4	2·79	578·0	—	36·70	24·95	9·11	15·76	Fermoy, 8½ months. To India.	—
52nd	Field Artillery - - -	133	63	1	1	3·33	473·7	7·52	7·52	25·04	9·14	19·29	Shorncliffe, 12 months - -	13
56th	Field Artillery - - -	134	106	1	2	5·66	805·9	7·46	14·92	42·38	15·47	19·19	Newcastle-on-Tyne, 12 months -	9

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	ROYAL ARTILLERY—*cont.*										days.	days.		
57th	Field Artillery - - - -	145	171	—	2	9·55	1179·3	—	13·79	65·86	24·04	20·38	Aldershot, 12 months - - -	5
58th	Field Artillery - - - -	123	67	—	—	4·95	544·7	—	—	40·24	14·68	26·96	Exeter, 11 months; Okehampton, 1 month.	6
61st	Field Artillery - - - -	11	22	—	—	·57	2000·0	—	—	51·82	18·91	9·46	Christchurch, 2 months. From India.	—
62nd	Field Artillery - - - -	114	77	—	7	3·43	675·4	—	61·40	30·08	10·98	16·25	Newcastle-on-Tyne, 12 months -	4
63rd	Field Artillery - - - -	101	57	2	1	3·16	564·3	19·80	9·90	31·29	11·42	20·24	Colchester, 12 months - - -	3
64th	Field Artillery - - - -	97	44	—	2	2·85	453·6	—	20·62	29·38	10·72	23·64	Athlone, 10 months; Curragh, 2 months	3
66th	Field Artillery - - - -	104	139	—	—	5·97	1336·5	—	—	57·40	20·95	15·68	Christchurch, 9 months; Newcastle-on-Tyne, 3 months.	3
67th	Field Artillery - - - -	148	108	—	2	6·54	729·7	—	13·51	44·19	16·13	22·10	Aldershot, 3 months; Fermoy, 9 months.	5
69th	Field Artillery - - - -	129	131	—	1	4·19	1015·5	—	7·75	32·48	11·85	11·65	Hilsea, 3 months; Limerick, 9 months	5
73rd	Field Artillery - - - -	113	98	—	1	2·82	867·2	—	8·85	24·96	9·11	10·50	Ipswich, 12 months - - -	1
74th	Field Artillery - - - -	90	95	—	2	3·53	1055·5	—	22·22	39·22	14·32	13·56	Longford, 10 months; Curragh, 2 months.	1
75th	Field Artillery - - - -	115	109	—	3	6·86	947·8	—	26·09	59·65	21·77	18·25	Aldershot, 9 months; Trowbridge, 3 months.	15
77th	Field Artillery - - - -	105	141	2	5	7·27	1342·8	19·04	47·62	69·33	25·30	18·95	Colchester, 12 months - - -	1
79th	Field Artillery - - - -	18	22	—	—	1·58	1222·2	—	—	87·78	32·04	26·21	Colchester, 1½ months. From India.	—
80th	Field Artillery - - - -	141	65	—	1	3·81	461·0	—	7·09	27·02	9·86	21·39	Athlone, 9 months; Limerick, 3 months.	5

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	ROYAL ARTILLERY—*cont.*										days.	days.		
1/1 Depôt	Field Artillery - - -	564	390	4	6	20·72	691·5	7·08	10·64	36·74	13·41	19·39	Woolwich, 12 months - - -	permanent.
2/1 Depôt	Field Artillery - - -	578	578	5	7	31·26	1000·0	8·65	12·11	54·10	19·74	19·74	Woolwich, 12 months - - -	"
1/2 Depôt	Field Artillery - - -	343	333	1	3	15·51	956·9	2·87	8·62	44·67	16·27	17·00	Woolwich, 12 months - - -	"
2/2 Depôt	Field Artillery - - -	235	261	—	3	13·94	915·8	—	10·53	48·91	17·85	19·49	Woolwich, 12 months - - -	"
10th	Mountain Artillery - - -	192	185	2	—	6·68	807·3	10·41	—	34·36	13·50	15·59	Newport (Mon.) 11 months; Hay, 1 month.	4
	Garrison Artillery, Eastern Division	2,115	1,510	12	22	78·36	713·9	5·67	10·40	37·05	13·53	18·94	Various.	

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							Admitted.	Died.	Invalided.	Average Constantly Sick.					
												days.	days.		
	ROYAL ARTILLERY—*cont.*														
	Garrison Artillery, Southern Division.	2,604	1,839	19	42	116·96	706·2	7·29	16·13	44·91		16·39	23·21	Various.	
	Garrison Artillery, Western Division	1,526	874	12	23	55·20	572·7	7·86	15·07	36·17		13·20	23·05	Various.	

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						Average	Admitted.	Died.	Invalided.	Average Constantly Sick.				
	ROYAL ARTILLERY—*cont.*										days.	days.		
	Royal Artillery: District Staff -	1,260	313	12	12	19·20	248·4	9·52	9·52	15·24	5·56	22·39	Various.	
	Royal Artillery, School of Gunnery -	354	60	—	—	3·58	169·5	—	—	10·11	3·69	21·77	Shoeburyness.	
	Royal Artillery, Various - -	384	158	2	16	21·18	410·5	5·21	41·67	55·16	20·13	48·98	Various.	
	Total Royal Artillery -	16,813	11,568	91	223	649·93	688·0	5·41	13·26	38·66	14·11	20·51		
	ROYAL ENGINEERS.													
	Royal Engineers - - -	4,484	2,050	31	39	124·11	457·2	6·91	8·70	27·68	10·10	22·09	Various.	
	FOOT GUARDS.													
1st	Grenadier Guards - - -	767	582	1	9	48·52	758·8	1·30	11·73	63·26	23·09	30·43	Dublin, 9 months; London, 3 months	27
2nd	Grenadier Guards - - -	296	264	—	4	12·61	891·9	—	13·51	42·60	15·55	17·43	Dover, 2 months; London, 4 months. From Bermuda.	—
3rd	Grenadier Guards - - -	777	748	7	17	52·76	962·7	9·01	21·88	68·03	24·78	25·74	London, 8 months; Windsor, 4 months	6
1st	Coldstream Guards - - -	653	840	4	15	56·12	1286·4	6·12	22·97	85·94	31·30	24·38	London, 9 months; Dublin, 3 months	6
2nd	Coldstream Guards - - -	703	619	5	22	45·24	880·5	7·11	31·28	64·35	23·49	26·68	London, 12 months - - -	9
1st	Scots Guards - - - -	618	424	2	13	32·08	686·1	3·23	21·03	51·91	18·94	27·61	London, 12 months - - -	9

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											days.	days.		
	FOOT GUARDS—*cont.*													
2nd	Scots Guards	655	434	2	13	29·17	662·6	3·05	19·82	44·53	16·26	24·55	Windsor, 8 months; London, 4 months	6
	Detachments Foot Guards	375	197	—	—	10·55	525·3	—	—	28·13	10·27	19·55	Various.	—
	Total Foot Guards	4,844	4,108	21	93	287·05	848·0	4·33	19·20	59·26	21·63	25·50		
	INFANTRY.													
1st	Royal Scots	203	167	—	—	6·53	822·6	—	—	32·16	11·74	14·27	York, 4 months. From South Africa.	—
2nd	Royal Scots	139	147	—	4	9·52	1057·5	—	28·78	68·49	25·00	23·64	Detachment, Aldershot, 9 months. To Malta.	—
1st	Royal West Surrey Regiment	873	965	3	21	51·93	1105·4	3·43	24·05	59·48	21·71	19·64	Aldershot, 11 months. To Malta.	—
2nd	East Kent Regiment	537	659	1	10	35·53	1227·2	1·86	18·62	66·16	24·15	19·68	Sheerness, 3 months; Aldershot, 9 months. Detachments at Chatham, Gravesend, and Maidstone.	5
1st	Royal Lancaster Regiment	598	392	3	9	22·52	655·5	5·02	15·05	37·66	13·74	20·97	Curragh, 10 months; Aldershot, 2 months.	10
1st	Northumberland Fusiliers	589	582	4	5	31·48	988·1	6·79	8·49	53·44	19·51	19·74	Dover, 3½ months; Woolwich, 7 months. Aldershot manœuvres.	11
1st	Royal Warwickshire Regiment	856	980	3	20	56·75	1144·9	3·50	23·36	66·30	24·20	21·14	London, 3 months; Aldershot, 9 months.	11
2nd	Royal Fusiliers	677	725	3	23	32·84	1070·9	4·43	33·97	48·51	17·70	16·53	Dover, 7 months; Woolwich, 4½ months. Aldershot manœuvres.	2
1st	Liverpool Regiment	58	93	1	5	7·09	1603·4	17·24	86·21	122·24	44·62	27·82	Aldershot, 2 months. To Bermuda.	—
2nd	Norfolk Regiment	615	582	4	16	28·61	946·3	6·50	26·01	46·52	16·98	17·94	Colchester, 12 months	1

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	INFANTRY—*cont.*										days.	days.		
1st	Lincolnshire Regiment	557	376	—	4	17·22	675·0	—	7·18	30·91	11·28	16·71	Shorncliffe, 8 months; Aldershot, 4 months.	14
1st	Devonshire Regiment	73	83	—	3	5·56	1137·0	—	41·09	76·16	27·80	24·45	Aldershot, 1 month. To Egypt.	—
1st	Somersetshire Light Infantry	575	661	2	20	41·14	1149·5	3·48	34·78	71·55	26·12	22·72	Aldershot, 10½ months. To Gibraltar.	—
1st	West Yorkshire Regiment	487	340	—	5	15·68	698·1	—	10·27	32·20	11·75	16·83	Preston, 8½ months; Fermoy, 3½ months. Detachments at Chester, Fleetwood, and Isle of Man.	12
2nd	East Yorkshire Regiment	361	325	1	2	13·80	900·3	2·77	5·54	38·23	13·95	15·50	Sheffield, 4 months; Manchester, 8 months. Detachment at Chester.	3
2nd	Leicestershire Regiment	564	854	5	11	44·95	1514·2	8·86	19·50	79·70	29·09	19·21	Warley, 7 months; London, 5 months	1
1st	Royal Irish Regiment	667	770	4	28	42·20	1154·4	6·00	41·98	63·25	23·09	20·00	Colchester, 10 months; Curragh, 1 month. Aldershot manœuvres.	6
1st	Yorkshire Regiment	510	682	3	11	44·34	1337·2	5·88	21·57	86·94	31·73	23·69	Portsmouth, 12 months. Detachments at Hilsea, Gosport, and Netley.	2
1st	Lancashire Fusiliers	757	599	1	15	30·60	791·3	1·32	19·81	40·42	14·75	18·64	Glasgow, 5 months; Belfast, 7 months. Detachment at Newtownards.	11
1st	Royal Scots Fusiliers	643	626	1	13	31·37	973·5	1·55	20·22	48·79	17·81	18·29	Dublin, 3 months; Glasgow, 9 months	10
2nd	Cheshire Regiment	507	543	5	3	24·47	1071·0	9·86	5·92	48·26	17·61	16·45	Sheffield, 8 months; Manchester, 4 months. Detachments at Birmingham, Chester, and Fleetwood.	2
2nd	Royal Welsh Fusiliers	636	567	4	16	29·73	891·5	6·29	25·16	46·74	17·06	19·14	Curragh, 12 months	11
1st	South Wales Borderers	827	786	5	10	47·44	950·4	6·04	12·09	57·36	20·94	22·03	Aldershot, 12 months	12
1st	King's Own Scottish Borderers	618	852	6	6	40·19	1378·6	9·70	9·70	65·03	23·73	17·21	Devonport, 11 months. From India.	—
1st	Scottish Rifles	902	1,271	4	22	62·13	1409·1	4·43	24·39	68·88	25·14	17·84	Aldershot, 11 months; Cork, 1 month	10

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							Admitted.	Died.	Invalided.	Average Constantly Sick.				
	INFANTRY—*cont.*										days.	days.		
1st	Royal Inniskilling Fusiliers	755	708	7	23	55·06	937·7	9·27	30·46	72·89	26·60	28·41	Portsmouth, 12 months. Detachments at Hilsea, Gosport, and Netley.	2
1st	Gloucestershire Regiment	613	704	5	16	49·09	1148·3	8·13	26·01	80·08	29·23	25·45	Dublin, 12 months	12
2nd	Worcestershire Regiment	592	413	—	4	21·14	697·6	—	6·75	35·71	13·03	18·68	Limerick, 4 months; Curragh, 8 months.	16
2nd	East Lancashire Regiment	597	465	1	6	21·22	778·9	1·67	10·05	35·45	12·97	16·56	Mullingar, 10 months; Curragh, 2 months.	11
2nd	East Surrey Regiment	640	655	3	8	27·58	1023·4	4·69	12·50	43·09	15·73	15·37	Guernsey and Alderney, 2 months; Tipperary, 10 months.	6
2nd	Duke of Cornwall's Light Infantry	673	372	1	5	17·22	552·7	1·48	7·43	25·59	9·34	16·89	Pembroke Dock, 11 months; Dublin, 1 month.	5
1st	West Riding Regiment	499	379	3	6	17·80	759·5	6·01	12·02	35·67	13·02	17·14	York, 12 months. Detachments at Bradford, Tynemouth, Lichfield, and Chester.	2
1st	Border Regiment	615	804	6	22	51·01	1307·3	9·76	35·77	82·93	30·27	23·15	Dover, 12 months. Detachment at Lydd.	1
1st	Royal Sussex Regiment	636	604	3	4	32·03	949·7	4·72	6·29	50·36	18·38	19·35	Dublin, 8¼ months; Preston, 3¾ months. Detachments at Fleetwood and Isle of Man.	6
2nd	Hampshire Regiment	816	473	6	6	32·60	579·6	7·35	7·35	39·95	14·58	25·15	Chatham, 8 months; Aldershot, 4 months. Detachments at Gravesend and Maidstone.	3
2nd	South Staffordshire Regiment	709	574	1	8	33·17	809·6	1·41	11·28	46·78	17·07	21·09	Dublin, 8 months; Curragh, 4 months	11
2nd	Dorsetshire Regiment	692	410	4	7	23·62	592·5	5·78	10·11	34·13	12·45	21·01	Devonport, 12 months	5
1st	South Lancashire Regiment	749	565	1	16	25·50	754·3	1·33	21·36	34·04	12·41	15·02	Jersey, 12 months	5

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Battery or Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Constantly Sick.	Ratio per 1,000 of Mean Strength.				Sick	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
						Average Constantly Sick.	Admitted.	Died.	Invalided.	Average Constantly Sick.	Average Time to each Soldier.			
	INFANTRY—*cont.*										days.	days.		
2nd	Welsh Regiment - - -	516	759	1	4	37·70	1470·9	1·94	7·75	73·06	26·67	18·13	Devonport, 11 months; Cork, 1 month	13
2nd	Royal Highlanders - - -	605	418	7	6	24·96	690·9	11·57	9·92	41·35	15·06	21·79	Belfast, 4 months; Limerick, 8 months. Detachments at Newtownards.	10
1st	Oxfordshire Light Infantry - -	501	502	1	17	30·29	1002·0	2·00	33·95	60·46	22·07	22·02	Portsmouth, 2 months; Gosport, 10 months.	4
1st	Essex Regiment - - -	709	463	2	10	26·13	653·0	2·82	14·10	36·85	13·45	20·60	Devonport, 1 month; Buttevant, 11 months.	7
1st	Derbyshire Regiment - -	608	769	—	9	27·50	1264·8	—	14·80	45·23	16·51	13·05	Devonport, 11 months; Colchester, 1 month.	13
2nd	Loyal North Lancashire Regiment -	657	454	—	8	20·11	691·0	—	12·18	30·61	11·17	16·17	Enniskillen, 12 months. Detachments at Londonderry and Belturbet.	8
1st	Northamptonshire Regiment -	775	776	3	14	38·99	1001·3	3·86	18·06	50·31	18·37	18·34	Aldershot, 12 months - - -	11
2nd	Royal Berkshire Regiment - -	691	376	1	9	20·29	544·1	1·45	13·02	29·36	10·72	19·70	Templemore, 1½ months; Cork, 10½ months.	10
2nd	Royal West Kent Regiment -	363	328	6	1	17·73	906·1	16·57	2·76	48·98	17·88	19·73	Portland, 1 month; Shorncliffe, 11 months.	9
1st	Yorkshire Light Infantry - -	636	675	1	14	33·07	1061·3	1·57	22·01	52·00	18·98	17·88	Gosport, 1 month; Guernsey and Alderney, 11 months.	4
2nd	Shropshire Light Infantry - -	670	516	4	10	30·74	770·1	5·97	14·89	45·88	16·74	21·74	Kilkenny, 1 month; Cork, 11 months -	10
1st	Middlesex Regiment - - -	591	405	1	1	18·66	685·3	1·69	1·69	31·57	11·52	16·82	Buttevant, 1 month; Kilkenny, 11 months.	12
2nd	King's Royal Rifle Corps - -	586	690	7	13	45·22	1177·5	11·94	22·18	77·17	28·16	23·92	Dublin, 11 months. To Gibraltar.	—
3rd	King's Royal Rifle Corps - -	47	23	—	—	·44	489·3	—	—	9·36	3·42	6·98	Parkhurst, 1 month. From Gibraltar.	—
1st	Wiltshire Regiment - - -	621	349	6	5	19·05	562·0	9·66	8·05	30·70	11·20	19·92	Curragh, 12 months - - -	9

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Battery or Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.				
	INFANTRY—*cont.*										days.	days.		
1st	Manchester Regiment - -	585	629	3	8	18·81	1075·2	5·13	13·68	32·22	12·06	10·91	Tipperary, 1¼ months; Kinsale, 10¾ months.	9
2nd	North Staffordshire Regiment -	549	275	4	10	16·92	500·9	7·28	18·21	30·82	11·25	22·46	Devonport, 1¼ months; Portland, 10¾ months. Detachment at Gosport.	3
1st	York and Lancaster Regiment -	609	377	2	1	14·50	619·0	3·28	1·64	23·81	8·69	14·04	Birr, 12 months. Detachment at Curragh,	7
1st	Durham Light Infantry - -	544	569	2	12	31·36	1045·9	3·67	22·06	57·65	21·04	20·11	Bradford, 8 months; Aldershot, 4 months. Detachments at Lichfield and Chester.	4
1st	Highland Light Infantry - -	653	699	3	33	38·73	1070·4	4·59	50·54	59·31	21·65	20·22	Dover, 12 months - - -	11
1st	Seaforth Highlanders - -	664	402	2	7	18·10	605·4	3·01	10·54	27·26	9·95	16·06	Dublin, 3¼ months; Fermoy, 8¾ months.	9
2nd	Gordon Highlanders - - -	592	429	3	7	20·02	724·7	5·07	11·82	33·82	12·34	17·03	Curragh, 12 months - - -	10
1st	Queen's Own Cameron Highlanders	700	354	1	7	18·95	505·7	1·43	10·00	27·07	9·88	19·54	Edinburgh, 12 months - - -	4
1st	Royal Irish Rifles - - -	668	337	7	4	15·65	475·3	10·16	5·81	22·75	8·30	17·47	Fermoy, 12 months - - -	10
2nd	Royal Irish Fusiliers - - -	647	204	5	13	12·75	315·3	7·73	20·09	19·71	7·19	23·81	Athlone, 12 months - - -	7
1st	Connaught Rangers - - -	24	63	—	—	·82	2625·0	—	—	34·16	12·50	4·75	Pembroke Dock, ¼ month. From India.	—
2nd	Argyll and Sutherland Highlanders	700	607	3	12	38·72	867·1	4·29	17·15	55·31	20·19	23·28	Aldershot, 12 months - - -	10
2nd	Leinster Regiment - - -	686	687	4	11	38·11	1000·4	5·83	16·03	55·55	20·28	20·25	Shorncliffe, 1 month; Aldershot, 11 months.	14
1st	Royal Munster Fusiliers - -	633	781	—	22	33·23	1233·8	—	34·75	52·49	19·16	15·53	Colchester, 11¼ months; Dublin, ¾ month.	8
1st	Royal Dublin Fusiliers - -	631	557	3	6	18·58	882·7	4·75	9·56	29·45	10·75	12·18	Newry, 12 months. Detachments at Dundalk and Newtownards.	5

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Battery or Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.				
											days.	days.		
	INFANTRY—*cont.*													
2nd	Rifle Brigade - - - -	502	448	3	7	21·29	893·4	5·98	13·94	42·41	15·48	17·35	Belfast, 12 months. Detachments at Downpatrick and Newtownards.	11
4th	Rifle Brigade - - - -	503	524	1	16	24·59	1041·7	1·99	31·81	48·89	17·84	17·13	Devonport, ¼ month; Parkhurst, 11¼ months. Detachment at Marchwood.	1
	Mounted Infantry - - -	232	102	—	—	4·48	439·6	—	—	19·31	7·05	16·06	Shorncliffe, 1 month; Aldershot, 6 months.	—
	Other Infantry - - -	1,118	736	—	31	37·11	658·3	—	27·73	77·91	28·44	42·80		
	Total Infantry Regiments -	42,250	38,026	190	741	2044·26	900·0	4·50	17·54	48·38	17·66	19·62		
	REGIMENTAL DEPÔTS.													
Depôt	Royal Scots - - - -	233	135	5	3	4·76	579·4	21·47	12·87	20·43	7·46	12·87	Glencorse - - - -	Since formation.
„	Royal West Surrey Regiment -	157	148	3	1	6·04	942·7	19·11	6·37	38·47	14·04	14·89	Guildford - - - -	„
„	East Kent Regiment - - -	146	277	1	4	10·75	1897·3	6·85	27·40	73·63	26·88	14·17	Canterbury - - - -	„
„	Royal Lancaster Regiment - -	189	66	2	—	1·96	349·2	10·58	—	10·37	3·78	10·84	Lancaster - - - -	„
„	Northumberland Fusiliers - -	127	107	—	1	4·48	842·5	—	7·89	35·27	12·87	15·28	Newcastle-on-Tyne - - -	„
„	Royal Warwickshire Regiment -	203	98	2	2	3·09	482·8	9·85	9·85	14·78	5·39	11·17	Warwick - - - - -	„
„	Royal Fusiliers - -	182	103	4	1	4·09	565·9	21·98	5·49	22·47	8·20	12·76	Hounslow - - - -	„
„	Liverpool Regiment - - -	169	134	2	—	3·60	792·9	11·83	—	21·30	7·77	9·81	Warrington - - - -	„
„	Norfolk Regiment - - -	155	81	3	1	2·28	522·6	19·35	6·45	14·71	5·37	10·27	Norwich - - - - -	„
„	Lincolnshire Regiment - -	137	70	—	1	3·52	510·9	—	7·29	25·69	9·37	18·35	Lincoln - - - - -	„

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Battery or Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Constantly Sick.	Ratio per 1,000 of Mean Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
						Average	Admitted.	Died.	Invalided.	Average Constantly Sick.	Average Time			
	REGIMENTAL DEPÔTS—*cont.*										days.	days.		
Depôt	Devonshire Regiment - -	149	98	1	1	5·94	657·7	6·71	6·71	39·87	14·55	22·12	Exeter - - - - -	Since formation.
„	Suffolk Regiment - - -	320	214	4	4	8·24	668·7	12·50	12·50	25·75	9·40	14·05	Bury St. Edmund's - - -	„
„	Somersetshire Light Infantry -	136	81	2	2	3·30	595·6	14·70	14·70	24·26	8·85	14·87	Taunton - - - - -	„
„	West Yorkshire Regiment - -	170	109	2	1	4·05	641·1	11·76	5·88	23·82	8·69	13·56	York - - - - -	„
„	East Yorkshire Regiment - -	142	93	2	—	2·90	654·9	14·08	—	20·42	7·45	11·38	Beverley - - - - -	„
„	Bedfordshire Regiment - -	235	208	—	3	9·13	885·1	—	12·77	38·85	14·18	16·02	Bedford - - - - -	„
„	Leicestershire Regiment - -	194	127	—	—	3·85	654·6	—	—	19·84	7·24	11·06	Leicester - - - - -	„
„	Royal Irish Regiment - -	204	109	—	—	3·97	534·3	—	—	19·46	7·10	13·29	Clonmel - - - - -	„
„	Yorkshire Regiment - - -	151	32	2	1	2·36	211·9	13·24	6·62	15·62	5·70	26·91	Richmond - - - -	„
„	Lancashire Fusiliers - - -	154	71	—	3	2·33	461·0	—	19·49	15·13	5·52	11·98	Bury - - - - -	„
„	Royal Scots Fusiliers - - -	131	126	1	—	4·47	961·8	7·63	—	34·12	12·45	12·95	Ayr - - - - -	„
„	Cheshire Regiment - - -	143	44	1	—	1·45	307·7	6·99	—	10·14	3·70	12·03	Chester - - - - -	„
„	Royal Welsh Fusiliers - -	193	115	1	2	4·92	595·9	5·18	10·36	25·49	9·30	15·61	Wrexham - - - - -	„
„	South Wales Borderers - -	158	93	1	—	3·79	588·6	6·33	—	23·98	8·75	14·87	Brecon - - - - -	„
„	King's Own Scottish Borderers -	137	107	—	—	5·06	1219·0	—	—	36·93	13·48	11·06	Berwick-on-Tweed - - -	„
„	Scottish Rifles - - - - -	183	105	2	1	3·90	573·7	10·92	5·46	21·31	7·78	13·56	Hamilton - - - - -	„

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Battery or Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Constantly Sick.	Ratio per 1,000 of Mean Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
						Average	Admitted.	Died.	Invalided.	Average Constantly Sick.	Average Time			
	REGIMENTAL DEPÔTS—*cont.*										days.	days.		
Depôt	Royal Inniskilling Fusiliers	158	46	1	2	1·72	297·1	6·33	12·66	10·89	3·97	13·65	Omagh	Since formation.
„	Gloucestershire Regiment	157	260	2	1	8·87	1656·1	12·73	6·37	56·49	20·62	13·45	Horfield	„
„	Worcestershire Regiment	136	63	1	1	2·67	463·2	7·35	7·35	19·63	7·16	15·46	Worcester	„
„	East Lancashire Regiment	153	138	—	6	6·32	902·0	—	39·21	41·31	15·08	16·72	Burnley	„
„	East Surrey Regiment	256	117	1	3	5·09	457·0	3·91	11·73	19·88	7·25	15·88	Kingston-on-Thames	„
„	Duke of Cornwall's Light Infantry	152	99	—	—	3·06	651·3	—	—	20·13	7·35	11·28	Bodmin	„
„	West Riding Regiment	136	115	—	—	4·16	845·6	—	—	30·58	11·16	13·20	Halifax	„
„	Border Regiment	127	63	1	4	4·24	496·1	7·88	31·50	33·39	12·19	24·56	Carlisle	„
„	Royal Sussex Regiment	173	123	1	—	2·74	711·0	5·78	—	15·84	5·78	8·13	Chichester	„
„	Hampshire Regiment	189	75	—	1	4·26	396·8	—	5·29	23·54	8·23	20·73	Winchester	„
„	South Staffordshire Regiment	156	103	—	1	4·77	660·3	—	6·41	30·58	11·16	16·90	Lichfield	„
„	Dorsetshire Regiment	119	76	3	1	2·39	638·7	25·20	8·40	20·08	7·33	11·47	Dorchester	„
„	South Lancashire Regiment	128	82	—	1	3·08	640·6	—	7·81	24·06	8·78	13·71	Warrington	„
„	Welsh Regiment	132	83	—	—	3·88	628·8	—	—	29·39	10·73	17·06	Cardiff	„
„	Royal Highlanders	136	101	1	2	3·62	742·6	7·35	14·70	26·61	9·72	13·08	Perth	„
„	Oxfordshire Light Infantry	114	70	—	3	4·64	614·9	—	26·31	40·70	14·86	24·19	Oxford	„

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							Admitted.	Died.	Invalided.	Average Constantly Sick.				
	REGIMENTAL DEPÔTS—*cont.*										days.	days.		
Depôt	Essex Regiment	193	124	—	—	6·32	642·5	—	—	32·75	11·95	18·60	Warley	Since formation.
„	Derbyshire Regiment	167	70	—	2	3·83	419·1	—	11·97	22·93	8·37	19·97	Derby	„
„	North Lancashire Regiment	144	88	1	1	3·20	611·1	6·94	6·94	22·22	8·11	13·27	Preston	„
„	Northamptonshire Regiment	177	112	1	—	3·19	632·8	5·65	—	18·02	6·58	10·40	Northampton	„
„	Royal Berkshire Regiment	129	82	2	—	2·71	635·7	15·50	—	21·01	7·66	12·06	Reading	„
„	Royal West Kent Regiment	152	113	1	1	3·77	743·4	6·58	6·58	24·80	9·11	12·17	Maidstone	„
„	Yorkshire Light Infantry	133	77	2	2	3·33	578·9	15·03	15·03	25·03	9·13	15·78	Pontefract	„
„	Shropshire Light Infantry	135	86	—	1	2·77	637·0	—	7·41	20·52	7·49	11·75	Shrewsbury	„
„	Middlesex Regiment	211	121	2	—	5·42	573·5	9·48	—	25·68	9·33	16·35	Hounslow	„
„	Wiltshire Regiment	103	74	1	3	3·62	718·5	9·71	29·13	35·15	12·83	17·86	Devizes	„
„	Manchester Regiment	162	125	1	4	4·43	771·6	6·17	24·69	27·35	9·98	12·94	Ashton-under-Lyne	„
„	North Staffordshire Regiment	178	106	1	2	4·81	595·5	5·62	11·24	27·02	9·86	16·56	Lichfield	„
„	York and Lancaster Regiment	132	47	—	2	1·30	356·0	—	15·15	9·84	3·59	10·09	Pontefract	„
„	Durham Light Infantry	158	148	2	1	7·03	936·7	12·66	6·32	44·49	16·24	17·33	Newcastle-on-Tyne	„
„	Highland Light Infantry	168	87	—	2	2·88	517·8	—	11·90	17·14	6·26	13·08	Hamilton	„
„	Seaforth Highlanders	188	115	—	3	3·78	611·7	—	15·96	20·11	7·34	13·00	Fort George	„

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Battery or Battalion.	Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalided.	Average Constantly Sick.	Ratio per 1,000 of Mean Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year, &c.	Years at Home since last return from Foreign Service.
							Admitted.	Died.	Invalided.	Average Constantly Sick.				
	REGIMENTAL DEPÔTS—*cont.*										days.	days.		
Depôt	Gordon Highlanders - - -	195	148	1	1	3·87	758·9	5·13	5·13	19·85	7·24	9·54	Aberdeen - - - - -	Since formation.
„	Cameron Highlanders - -	95	23	—	—	·83	242·1	—	—	8·74	3·19	13·17	Inverness - - - - -	„
„	Royal Irish Rifles - - -	201	144	1	2	5·70	716·4	4·97	9·95	28·36	10·35	14·45	Belfast - - - - -	„
„	Royal Irish Fusiliers - - -	165	50	1	4	3·06	303·0	6·06	24·24	18·55	6·77	22·34	Armagh - - - - -	„
„	Connaught Rangers - - -	187	81	1	5	4·37	433·2	5·35	26·74	23·37	8·53	19·69	Galway - - - - -	„
„	Argyll and Sutherland Highlanders	212	136	3	1	5·43	641·5	14·15	4·71	25·61	9·41	14·57	Stirling - - - - -	„
„	Leinster Regiment - - -	181	175	2	—	4·99	966·9	11·04	—	27·57	10·06	10·41	Birr - - - - -	„
„	Royal Munster Fusiliers - -	208	144	2	2	4·45	692·3	9·62	9·62	21·39	7·81	11·28	Tralee - - - - -	„
„	Royal Dublin Fusiliers - -	129	81	1	1	2·41	627·9	7·75	7·75	18·68	6·82	10·86	Naas - - - - -	„
„	King's Royal Rifle Corps and Rifle Brigade.	703	634	3	1	24·82	901·8	4·27	1·42	35·30	12·89	14·29	Winchester - - - -	„
„	Provisional Battalion - -	406	483	—	1	21·37	1189·7	—	2·46	52·64	19·21	16·15	Shorncliffe - - - -	„
„	Detached - - - -	194	37	—	1	1·85	190·7	—	5·15	9·53	3·48	18·25		
	Total Regimental Depôts -	12,326	8,336	81	101	325·19	676·3	6·57	8·19	26·38	9·63	14·24		
	Garrison Staff and Departments -	6,779	2,940	39	64	171·49	433·7	5·75	9·44	25·30	9·23	21·29		

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ABSTRACT No. XL.—Table, taken from the Reports of the Principal Medical Officers, showing the various Corps which served in the different Foreign Commands during the Year 1891, and some of the most important of their Health Statistics.

Battery, Company or Battn.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Died.	Invalided.	Constantly Sick.	Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
	GIBRALTAR.															
	Royal Artillery.												days.	days.		
3rd	Eastern Division - -	254	122	1	—	1	4	10·06	519·7	3·94	15·75	39·61	14·46	27·81	Gibraltar, 12 months - - -	5
6th	Eastern Division - -	254	151	—	—	—	4	8·85	594·5	—	15·75	34·84	12·72	21·39	Gibraltar, 12 months - - -	6
12th	Eastern Division - -	163	129	—	1	1	5	8·50	791·4	6·12	30·67	52·15	19·05	24·05	Gibraltar, 12 months - - -	5
19th	Eastern Division - -	263	120	1	—	1	3	8·73	456·2	3·80	11·41	33·19	12·11	26·55	Gibraltar, 12 months - - -	5
	District Staff, &c. - -	21	3	—	—	—	1	·27	142·9	—	47·62	12·86	4·69	7·00	Gibraltar, 12 months - - -	Various
	Total - - -	955	535	2	1	3	17	36·41	560·2	3·14	17·80	38·12	13·92	24·84		
	Royal Engineers - -	318	130	1	1	2	3	8·40	408·8	6·29	9·43	26·41	9·64	23·58	Gibraltar, 12 months - - -	Various
	Infantry Regiments.															
1st	Somersetshire Light Infantry	83	99	—	—	—	—	4·04	1193·4	—	—	48·67	17·77	14·89	Gibraltar, 1½ months. From England, 18th November.	—
1st	South Staffordshire Regiment	737	550	6	—	6	12	33·18	746·3	8·14	16·28	45·02	16·30	22·02	Gibraltar, 10½ months. To Egypt, 18th November.	5
1st	South Lancashire Regiment -	350	616	3	1	4	12	38·11	724·7	4·70	14·12	44·84	16·32	23·52	Gibraltar, 12 months - - -	2
1st	Royal Highlanders - -	363	477	2	1	3	14	36·00	552·7	3·46	16·22	41·71	15·22	27·55	Gibraltar, 12 months - - -	2

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Battery, Company or Battalion.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Ratio per 1,000 of Strength. Died.	Ratio per 1,000 of Strength. Invalided.	Ratio per 1,000 of Strength. Constantly Sick.	Average Sick Time to each Soldier. days.	Average Duration of each Case of Sickness. days.	Stations occupied during the Year.	Completed Years of Service in Command.
	GIBRALTAR—*cont.*															
	Infantry Regiments—cont.															
2nd	King's Royal Rifle Corps	65	63	—	—	—	—	2·89	969·2	—	—	44·46	16·23	16·74	Gibraltar, 4 month. From England, 7th December.	—
3rd	King's Royal Rifle Corps	638	301	3	—	3	5	21·56	471·8	4·70	7·84	33·79	12·33	26·14	Gibraltar, 11¼ months. To England, 7th December.	5
	Total	3,356	2,106	14	2	16	43	135·78	650·8	4·94	13·89	41·96	15·31	23·53		
	Garrison Staff and Departments.															
Det.	Army Service Corps	52	35	1	—	1	—	1·67	673·1	19·23	—	33·13	11·72	17·42	Various	Various
„	Medical Staff Corps	75	46	—	—	—	4	2·91	613·3	—	53·33	38·80	14·16	23·00	„	„
„	Ordnance Store Corps	38	13	—	—	—	—	·31	342·1	—	—	21·33	7·78	22·74	„	„
„	Staff, &c.	8	1	—	—	—	—	·04	125·0	—	—	5·00	1·83	14·60	„	„
	Total	173	95	1	—	1	4	5·43	549·1	5·78	23·12	31·39	11·46	20·86		
	Grand total	4,682	2,896	18	4	22	67	136·02	613·1	4·70	14·31	39·73	14·50	23·69		
	MALTA.															
	Royal Artillery.															
2nd	Southern Division	50	46	—	—	—	2	3·42	920·0	—	40·00	68·40	24·97	27·14	Ericsoli, 3 months. From England, October.	—
6th	Southern Division	279	135	1	—	1	11	11·95	483·9	3·58	39·42	42·83	15·63	32·31	Ericsoli, 8 months; St. Elmo, 4 months.	4
18th	Southern Division	388	177	5	—	5	11	13·96	539·6	15·24	33·53	39·21	14·31	26·52	Tigne, 8 months. Ericsoli, 4 months	4

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Battery, Company or Battn.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Died.	Invalided.	Constantly Sick.	Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
	MALTA—*cont.*															
	Royal Artillery—cont.												days.	days.		
14th	Southern Division	128	54	1	—	1	1	4·96	421·9	7·81	7·81	38·75	14·14	33·52	St. James' Cavalier, 9 months. To England, 19th October.	1
15th	Southern Division	114	83	—	—	—	4	5·65	728·1	—	35·08	49·56	18·09	24·84	Ricasoli, 9 months. To England, 19th October.	1
27th	Southern Division	235	176	1	—	1	3	11·83	617·5	3·50	10·52	41·51	15·15	24·53	St. Elmo, 8 months; Tigne, 4 months	2
29th	Southern Division	121	79	—	—	—	2	5·60	652·9	—	16·52	46·28	16·89	25·87	Tigne, 4 months. Company formed in Malta.	—
	District Staff, &c.	29	2	—	—	—	—	·17	69·0	—	—	5·86	2·14	31·02	Various	Various
	Total	1,334	752	8	—	8	34	56·44	563·7	5·99	25·48	42·31	15·44	27·39		
	Royal Engineers	165	109	1	—	1	1	6·32	660·6	6·06	6·06	38·30	13·98	21·15	St. Francis' Barracks, 12 months	„
	Infantry Regiments.															
2nd	Royal Scots	977	738	4	—	4	20	46·59	755·4	4·09	20·47	47·69	17·41	23·04	Isola District 12 months. Detachment at Pembroke.	1
1st	Bedfordshire Regiment	4	3	1	1	2	4	1·75	750·0	500·00	1000·00	437·50	159·68	212·92		1
1st	Welsh Regiment	939	649	1	1	2	16	44·28	691·2	2·13	17·03	47·16	17·21	24·90	Floriana and Citta Vecchia, 12 months	2
2nd	Essex Regiment	389	276	6	—	6	11	20·28	709·5	15·42	28·27	52·13	19·03	26·82	St. Angelo, Vittoriosa, and Salvatore, 11 months. Gozo, 1 month.	5
1st	Royal Berkshire Regiment	995	678	7	—	7	20	44·67	681·4	7·03	20·10	44·89	16·39	24·05	Lower St. Elmo and Marsamuscetto, 12 months.	5
1st	Royal West Kent Regiment	957	464	6	—	6	17	34·16	484·8	6·26	17·76	35·69	13·02	26·87	Manoel, 12 months	2
1st	Shropshire Light Infantry	205	94	—	—	—	6	6·32	458·5	—	29·26	30·83	11·25	24·54	Gozo and Pembroke, 3 months. To Egypt, 17th March.	5

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Battery, Company or Battn.	Corps and Commands.	Average Annual Strength.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
			In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.				
	MALTA—*cont.*											days.	days.		
	Infantry Regiments—cont.														
2nd	Royal Irish Rifles - -	611	1	—	1	5	22·54	766·0	1·63	8·18	36·89	13·46	17·58	Pembroke, Gozo, and Isola. From Egypt, 27th March.	—
2nd	Connaught Rangers - -	857	9	—	9	33	56·99	784·7	9·40	39·70	59·54	21·73	27·70	Verdala, 13 months . . .	2
	Other Corps - - -	5	1	—	—	—	·10	200·0	—	—	20·00	7·30	36·50	Various - - - -	Various
	Total - -	6,039	35	2	37	137	277·63	682·6	6·13	22·68	45·98	16·78	24·59		
	Garrison Staff and Departments.														
Det.	Medical Staff Corps -	103	2	—	2	3	3·03	534·0	19·41	29·12	29·43	10·73	20·11	Various - - - -	Various
	Other Staff and Departmental Corps.	56	1	1	2	4	1·39	285·7	35·71	71·42	23·03	8·41	29·43	„ - - - -	„
	Total - - -	159	3	1	4	7	4·32	446·5	25·16	44·03	27·17	9·92	22·21		
	Grand Total - -	7,397	47	3	50	179	344·76	656·6	6·49	23·13	44·79	16·35	24·90		
	CYPRUS.														
	Royal Engineers -	2	—	—	—	—	—	—	—	—	—	—	—	Limassol, 8 months; Troodos, 4 months.	Various
2nd	Essex Regiment - -	517	2	—	2	4	14·65	576·4	3·87	7·74	23·34	10·34	17·94	Polymedia and Nicosia months; Troodos, 4 months.	6
	Garrison Staff and Departments.	35	—	—	—	2	·39	371·4	—	57·14	11·14	4·07	10·95	Limassol, Polymedia, and Nicosia, 8 months; Troodos, 4 months.	Various
	Total - -	554	2	—	2	6	15·04	561·3	3·61	10·83	27·15	9·91	17·65		

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Battery, Company or Battn.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Died.	Invalided.	Constantly Sick.	Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
	CANADA.															
	Royal Artillery.												days.	days.		
3rd	Western Division - -	237	102	2	1	3	4	5·19	430·4	12·66	16·87	21·90	7·99	18·57	Halifax, 12 months - - -	1
Det. 17th	Western Division - -	103	53	—	—	—	1	2·85	514·6	—	9·71	27·67	10·10	19·62	Halifax, 12 months - - -	1
	Total - - -	340	155	2	1	3	5	8·04	455·9	8·82	14·70	23·65	8·63	18·95		
	Royal Engineers.															
18th	Company - - -	85	26	—	—	—	—	1·10	305·9	—	—	12·94	4·72	15·44	Halifax, 12 months - - -	4
40th	Company - - -	60	14	—	—	—	1	·50	233·3	—	16·66	8·33	3·04	13·03	Halifax, 12 months - - -	3
	Total - - -	145	40	—	—	—	1	1·60	275·9	—	6·89	11·03	4·02	14·60		
	Infantry Regiments.															
1st	Leicestershire Regiment -	721	262	4	—	4	4	9·71	363·4	5·55	5·55	13·46	4·91	13·53	Halifax, 10 months. From Bermuda, 5th March.	—
2nd	West Riding Regiment -	165	68	1	—	1	1	4·85	412·1	6·06	6·06	29·39	10·73	26·03	Halifax, 2 months. To West Indies, 9th March.	2
	Total - - -	886	330	5	—	5	5	14·56	372·5	5·64	5·64	16·43	6·00	16·10		
	Garrison Staff and Departments.	53	6	—	—	—	—	·17	113·2	—	—	3·21	1·17	10·34	Halifax - - - - -	Various
	Grand Total -	1,424	531	7	1	8	11	24·37	372·8	5·61	7·72	17·11	6·25	16·75		

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Battery, Company or Battn.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Died.	Invalided.	Constantly Sick.	Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
	BERMUDA.															
	Royal Artillery.												days.	days.		
1	Western Division - -	218	108	—	—	—	6	6·03	495·4	—	27·52	27·66	10·10	20·38	St. George's, 12 months. Detachments at Prospect and Ireland Island.	1
	Royal Engineers.															
27th	Company - - -	69	28	—	—	—	1	1·83	405·8	—	14·49	26·52	9·68	23·86	St. George's, 12 months - -	3
36th	Company - - -	91	31	—	—	—	1	1·42	340·7	—	10·99	15·60	5·70	16·72	Prospect, 12 months, Detachment at Boaz Island.	1
	Total - - -	160	59	—	—	—	2	3·25	368·8	—	12·50	20·31	7·41	20·11		
	Foot Guards.															
2nd	Grenadier Guards - -	315	186	1	—	1	3	10·09	590·5	3·17	9·52	32·03	11·69	19·80	St. George's, 7 months. Detachments at Ireland Island and Prospect. To England, 14th July.	1
	Infantry Regiments.															
1st	(King's) Liverpool Regiment	691	374	4	—	4	7	17·88	541·2	5·79	10·13	25·88	9·44	17·45	Prospect, 10 months. Detachments at Ireland Island and St. George's. From England, 26th February.	—
1st	Leicestershire Regiment -	144	43	—	—	—	6	3·35	298·6	—	41·67	23·26	8·49	28·44	Prospect, 2 months. Detachments at Ireland Island and Boaz. To Halifax N.S., 27th February.	2
	Total - - -	835	417	4	—	4	13	21·23	499·4	4·79	15·57	25·43	9·28	18·58		

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Battery Company or Battn.	Corps and Commands	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Ratio per 1,000 of Strength. Died.	Ratio per 1,000 of Strength. Invalided.	Ratio per 1,000 of Strength. Constantly Sick.	Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
	BERMUDA—*cont.*															
	Garrison Staff and Departments.												days.	days.		
	Army Service Corps - -	9	1	—	—	—	—	·04	111·1	—	—	4·44	1·62	14·60	Various stations -	Various
	Medical Staff Corps - -	25	1	—	—	—	—	·03	40·0	—	—	1·20	·44	10·95	Various stations - - -	„
	Ordnance Store Corps - -	32	1	—	—	—	—	·02	31·3	—	—	·63	·23	7·30	Various stations - - -	„
	Garrison Staff - - -	7	—	—	—	—	—	—	—	—	—	—	—	—	Various stations - - -	„
	Total - - -	73	3	—	—	—	—	·09	41·1	—	—	1·23	·45	10·95		
	Grand Total -	1,601	773	5	—	5	24	40·69	482·8	3·12	14·99	25·42	9·28	19·21		
	WEST INDIES. (BARBADOS, &C.)															
	Royal Artillery.															
3rd	Western Division -	117	278	3	—	3	5	15·54	2376·1	25·64	42·73	132·82	48·47	20·40	St. Lucia, 12 months. Detachment at Barbados.	6
	Royal Engineers - -	0	7	—	—	—	—	·24	350·0	—	—	12·00	4·38	12·51	St. Lucia and Barbados - -	Various
	Infantry Regiments															
2nd	West Riding Regiment -	367	624	2	—	2	2	36·61	1700·3	5·45	5·45	99·75	36·41	21·41	Barbados 9 months. Detachment at St. Lucia, 1 month. From Halifax, N.S., 24th March.	—

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Battery, Company or Battn.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Died.	Invalided.	Constantly Sick.	Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
	WEST INDIES—*cont.* (BARBADOS, &c.)—*cont.*															
	Infantry Regiments—cont.												days.	days.		
2nd	York and Lancaster Regiment	96	107	—	—	—	6	7·49	1114·6	—	62·50	78·02	28·47	25·55	Barbados, 3 months. To South Africa, 28th March.	3
	West India Regiment - -	4	1	1	—	1	—	·02	250·0	250·0	—	5·00	1·82	7·30	Various - - - - -	Various.
	Total - -	467	732	3	—	3	8	44·12	1567·4	6·42	17·13	94·47	34·48	22·00		
	Garrison Staff and Departments.	27	13	1	—	1	—	·42	481·5	37·04	—	15·55	5·68	11·79	Various - - - -	„
	Total, Barbados, &c. -	631	1,030	7	—	7	13	60·32	1632·3	11·09	20·60	95·59	34·89	21·37		
	(JAMAICA, &c.)															
	Royal Artillery.															
10th	Western Division - -	111	90	4	—	4	1	6·75	810·8	36·04	9·01	60·81	22·20	27·37	Newcastle, 12 months. Detachments at Port Royal and Up Park Camp.	1
	District Staff - - -	2	1	—	—	—	—	·08	500·0	—	—	40·00	14·60	29·20	Newcastle, 12 months - - -	Various.
	Total - -	113	91	4	—	4	1	6·83	805·3	35·40	8·85	60·44	22·06	27·40		
	Royal Engineers.															
	West India (Submarine Mining) Company.	24	6	—	—	—	—	·14	250·0	—	—	5·83	2·13	8·53	Port Royal. Detachment at Up Park Camp.	„
	Supernumerary Staff - -	10	9	—	—	—	1	·43	900·0	—	100·00	43·00	15·69	17·44	Various - - - - -	„
	Total - -	34	15	—	—	—	1	·57	441·2	—	29·41	16·76	6·12	13·87		

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Battery, Company, or Battn.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Ratio per 1,000 of Strength. Died.	Ratio per 1,000 of Strength. Invalided.	Ratio per 1,000 of Strength. Constantly Sick.	Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
	WEST INDIES—*cont.* (JAMAICA, &c.)—*cont.*															
	Infantry Regiments.												days.	days.		
2nd	West Riding Regiment	217	182	2	—	2	—	9·82	838·7	9·22	—	45·25	16·52	19·69	Newcastle, 9 months. Detachment at Up Park Camp. From Halifax, N.S., 18th March.	—
2nd	York and Lancaster Regiment	59	59	2	—	2	5	4·88	1,000·0	33·90	84·75	82·71	30·19	30·19	Newcastle, 2½ months. Detachment at Up Park Camp. To South Africa, 19th March.	2
	West India Regiment	17	7	—	—	—	—	·17	411·8	—	—	10·00	3·65	8·86	Up Park Camp, 12 months. Detachment at Nassau.	Various.
	Total	293	248	4	—	4	5	14·87	846·4	13·65	17·06	50·75	18·52	21·88		
	Garrison Staff and Departments.	25	7	—	—	—	—	·19	280·0	—	—	7·60	2·77	9·90	Various	„
	Total, Jamaica, &c.	465	361	8	—	8	7	22·46	776·3	17·20	15·05	48·30	17·63	22·71		
	Grand Total, West Indies	1,096	1,391	15	—	15	20	82·78	1,269·1	13·69	18·25	75·53	27·57	21·72		
	SOUTH AFRICA AND ST. HELENA.															
	Cavalry.															
11th	Hussars	527	560	10	—	10	18	44·17	1062·6	18·97	34·16	83·81	30·78	28·79	Pietermaritzburg, 9 months; Howick, 3 months. Detachment at Eshowe, 9 months.	1
	Royal Artillery.															
4th	Mountain Battery	172	206	6	—	6	4	14·54	1197·7	34·88	23·26	84·53	30·86	25·76	Pietermaritzburg, 9 months; Howick, 3 months.	7

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Battery, Company, or Battn.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Died.	Invalided.	Constantly Sick.	Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
	SOUTH AFRICA AND ST. HELENA—*cont.*															
	Royal Artillery—cont.												days.	days.		
8th	Southern Division - -	204	135	2	—	2	5	10·83	661·8	9·80	24·51	53·09	19·38	29·28	Cape Town, 12 months. Detachment at Simonstown, 12 months.	4
Det.	Western Division - -	20	1	—	—	—	—	·19	50·0	—	—	9·50	3·47	69·35	St. Helena, 12 months - - -	—
	Total - - -	396	342	8	—	8	9	25·56	863·6	20·20	23·73	64·54	23·56	27·28		
	Royal Engineers.															
29th	Company - - -	73	36	1	—	1	1*	2·76	493·1	13·70	13·70	37·81	13·80	27·98	Cape Town, 12 months. Detachments at various stations.	5
	Infantry Regiments.															
1st	Royal Scots - - -	316	334	5	—	5	16	20·08	1025·3	15·82	50·63	63·39	23·14	22·56	Pietermaritzburg, 4 months; Cape Town, 3 months. Detachments at Eshowe, 5 months; N'Kandhla, 3 months. To England, 8th August.	7
1st	East Yorkshire Regiment -	803	589	1	1	2	12	39·41	733·5	2·49	14·94	49·08	17·91	24·42	Mafeking, 2 months; Wynberg, 10 months. Detachments at St. Helena, 3 months; Simon's Town, 12 months; Mafeking, 4 months; Wynberg, 2 months.	3
Det.	North Staffordshire Regiment	347	300	—	—	—	18	24·43	864·5	—	51·87	70·40	25·70	29·72	Cape Town, 12 months. Company at Wynberg, 3 months.	1
1st 2nd	York and Lancaster Regiment	548	440	3	—	3	3	22·01	802·9	5·47	5·47	40·16	14·66	18·26	Pietermaritzburg, 8 months. Detachments at St. Helena, 9 months; Eshowe, 7 months; N'Kandhla, 3 months. From West Indies, 24th April.	—
	Total - - -	2,014	1,653	9	1	10	49	105·88	820·7	4·96	24·33	52·57	19·19	23·38		

* Discharged in Colony.

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Battery, Company, or Battn.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Ratio per 1,000 of Strength. Died.	Ratio per 1,000 of Strength. Invalided.	Ratio per 1,000 of Strength. Constantly Sick.	Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
	SOUTH AFRICA AND ST. HELENA—*cont.*															
	Garrison Staff and Departments.												days.	days.		
	Army Service Corps - -	33	8	—	—	—	—	·41	242·4	—	—	12·42	4·53	18·71	Various stations - - -	Various
	Medical Staff Corps - -	65	38	—	—	—	1	2·73	584·6	—	15·38	42·00	15·33	26·22	„ - - -	„
	Ordnance Store Corps - -	43	17	—	—	—	—	·83	395·3	—	—	19·30	7·05	17·82	„ - - -	„
	Garrison Staff - - -	34	2	—	—	—	1	·17	58·8	—	29·41	5·00	1·82	31·03	„ - -	„
	Total - - -	175	65	—	—	—	2	4·14	371·4	—	11·43	23·66	8·63	23·25		
	Grand Total - -	3,185	2,656	28	1	29	79	182·51	833·9	9·10	24·80	57·30	20·92	25·08		
	MAURITIUS.															
	Royal Artillery.															
4th	Southern Division - -	50	93	1	—	1	1	4·88	1860·0	20·00	20·00	97·60	35·62	19·15	Port Louis and Curepipe. To England 22nd July.	2
23rd	Southern Division - -	61	57	2	—	2	—	2·94	934·4	32·78	—	48·19	17·59	18·84	Port Louis and Curepipe. From England 8th July.	—
	Total - - -	111	150	3	—	3	1	7·82	1351·3	27·03	9·01	70·45	25·78	19·07		
	Royal Engineers -	25	24	1	—	1	2	·86	960·0	40·00	80·00	34·40	12·56	13·08	Port Louis and Curepipe - -	Various
	Infantry Regiments.															
1st	North Staffordshire Regiment	421	493	9	1	10	4	26·18	1171·0	23·75	9·50	61·94	22·69	19·38	Port Louis and Curepipe - -	1

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Battery, Company, or Battn.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Died.	Invalided.	Constantly Sick.	Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
													days.	days.		
	MAURITIUS—*cont.*															
	Garrison Staff and Departments.	23	17	1	—	1	1	·56	739·1	43·48	43·48	24·35	8·89	12·02	Port Louis and Curepipe	Various
	Grand Total	580	684	14	1	15	8	35·42	1179·4	25·86	13·79	61·07	22·29	18·90		
	CEYLON.															
	Royal Artillery															
4th	Southern Division	120	116	2	1	3	4	5·03	966·7	25·00	33·33	41·92	15·30	15·83	Trincomalee, 12 months	5
16th	Southern Division	118	83	1	—	1	5	5·56	703·4	8·47	42·37	47·12	17·20	24·45	Colombo, 12 months	5
	Staff	4	—	—	—	—	—	—	—	—	—	—	—	—	Various	Various
	Total	242	199	3	1	4	9	10·59	822·3	16·53	37·19	43·76	15·97	19·42		
	Royal Engineers	76	106	3	—	3	1	4·89	1421·1	39·47	13·16	64·34	23·48	16·53	Colombo and Trincomalee, 12 months	„
	Infantry Regiments.															
1st	Shropshire Light Infantry	—	—	—	—	—	—	·06	—	—	—	—	—	—	Two men transferred to hospital from troopship, while on passage to Hong Kong.	—
1st	Gordon Highlanders	901	833	7	—	7	34	51·44	924·5	7·77	37·73	57·09	20·84	22·54	Colombo, 12 months. Detachments at Kandy and Trincomalee.	3
	Total	901	833	7	—	7	34	51·50	924·5	7·77	37·73	57·16	20·86	22·57		
	Garrison Staff and Departments.	32	7	1	—	1	—	·30	218·7	31·25	—	9·37	3·32	15·64	Various	Various
	Grand Tota	1,251	1,147	14	1	15	44	67·28	916·8	11·99	35·17	53·78	19·63	21·41		

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Battery, Company, or Battn.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Died.	Invalided.	Constantly Sick.	Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
	China.															
	Royal Artillery.												days.	days.		
10th	Southern Division	17	13	—	—	—	—	1·07	764·7	—	—	63·94	22·97	30·04	Hong Kong, 2 months. To England 21st February.	4
30th	Southern Division	88	110	3	—	3	—	5·33	1250·0	34·09	—	60·57	22·11	17·68	Hong Kong, 9 months*	1
38th	Southern Division	72	119	1	—	1	—	6·62	1652·7	13·89	—	91·94	33·56	20·28	Hong Kong, 7½ months. From Malta 10th February.*	—
25th	Southern Division	57	131	—	—	—	—	4·76	2298·2	—	—	83·51	30·47	13·26	Hong Kong, 3 months. Formed 1st October.	—
	Total	234	373	4	—	4	—	17·78	1594·0	17·09	—	75·98	27·73	17·39		
	Royal Engineers	155	107	1	—	1	2	4·52	690·3	6·45	12·90	29·16	10·64	15·42	Hong Kong, 12 months	Various
	Infantry.															
1st	Argyll and Sutherland Highlanders.	908	1,150	6	2	8	26	49·15	1266·5	8·81	28·63	54·13	19·76	15·52	Hong Kong, 12 months	3
	Garrison Staff and Departments.	37	21	1	—	1	1	·72	567·6	27·03	27·03	19·46	7·10	12·51	Hong Kong, 12 months	Various
	Grand total	1,334	1,651	12	2	14	29	72·17	1237·6	10·49	21·74	54·10	19·75	15·96		
	Straits Settlements.															
	Royal Artillery.															
13th	Southern Division	18	20	—	—	—	1	·97	1111·1	—	55·55	53·88	19·67	17·70	Fort Canning and outlying forts, 2 months. To England 28th February.	3

* Amalgamated into 25th Company, 1st October.

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Battery, Company, or Battn.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Died.	Invalided.	Constantly Sick.	Average Sick Time to each Soldier. days.	Average Duration of each Case of Sickness. days.	Stations occupied during the Year.	Completed Years of Service in Command.
	STRAITS SETTLEMENTS—*cont.*															
	Royal Artillery—cont.															
26th	Southern Division - -	216	251	1	—	1	3	18·56	1162·0	4·63	13·88	85·92	31·36	26·99	Fort Canning and outlying forts, 12 months.	1
	Total - -	234	271	1	—	1	4	19·53	1158·1	4·27	17·09	83·46	30·46	26·30		
	Royal Engineers -	63	64	1	1	2	3	4·55	1015·9	31·75	47·63	72·23	26·36	25·94	Pulo Brani, Blakan Mati, and Tanglin, 13 months.	Various
	Infantry.															
2nd	Northamptonshire Regiment	935	1,113	3	—	3	33	94·25	1195·7	3·20	40·64	100·80	36·79	30·77	Tanglin, 12 months. Detachment at Penang.	2
	Garrison Staff and Departments.	38	10	—	—	—	—	·40	263·2	—	—	10·53	4·47	17·00	Various - - - -	Various
	Grand total -	1,270	1,463	5	1	6	45	118·73	1151·9	4·72	35·43	98·48	34·12	29·62		
	EGYPT.															
	Cavalry.															
1st	Dragoon Guards - -	30	31	1	—	1	—	·90	1033·3	33·33	—	30·00	10·96	10·60	Abbassiyeh, 24 months. From India, 19th October.	—
17th	Lancers - - -	115	78	—	—	—	1	4·10	678·3	—	8·70	35·65	13·01	19·19	Abbassiyeh, 9¼ months. To England, 18th October.	1

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Battery, Company, or Battn	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths. In the Command.	Deaths. Of Invalids.	Deaths. Total.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength. Admitted.	Died.	Invalided.	Constantly Sick.	Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
	EGYPT—*cont.*															
	***Cavalry*—cont.**												days.	days.		
20th	Hussars	—	—	—	—	—	1	·24	—	—	—	—	—	—	Left behind on departure of squadron in 1890.	—
	Total	145	109	1	—	1	2	5·24	751·7	6·90	13·79	36·14	13·19	17·55		
	Royal Artillery.															
10th	Eastern Division	135	91	3	—	3	—	4·95	674·1	22·22	—	36·67	15·38	19·85	Cairo, 12 months. Detachment at Alexandria.	6
	Royal Engineers.															
24th	Company	98	43	1	—	1	3	2·84	438·8	10·20	30·61	28·98	10·58	24·11	Cairo, 12 months. Detachment at Alexandria.	7
	Infantry Regiments.															
1st	Devonshire Regiment	667	912	1	—	1	6	57·65	1367·3	1·50	9·00	86·43	31·45	23·07	Alexandria, 10½ months. From England, 11th February.	—
2nd	Suffolk Regiment	85	78	1	—	1	11	3·74	917·6	11·76	129·41	44·00	16·06	17·50	Alexandria, 1½ months. To India, 11th February.	1
1st	Scottish Rifles	—	—	—	—	—	1	·33	—	—	—	—	—	—	Disembarked at Suez, *en route* to India.	—
1st	South Staffordshire Regiment	62	79	—	—	—	—	3·43	1274·2	—	--	55·32	20·19	15·85	Cairo, 1 month. From Gibraltar, 29th November.	—
1st	Dorsetshire Regiment	825	729	2	1	3	22	45·96	883·6	3·64	26·67	55·71	20·33	23·01	Cairo, 12 months	2
1st	Shropshire Light Infantry	574	638	6	—	6	14	37·78	1111·5	10·45	24·39	65·82	24·02	21·61	Cairo, 8 months. From Malta, 21st March. To Hong Kong, 1st December.	—

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Battery, Company, or Ratin.	Corps and Commands.	Average Annual Strength.	Admitted into Hospital.	Deaths.			Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in Command.
				In the Command.	Of Invalids.	Total.			Admitted.	Died.	Invalided.	Constantly Sick.				
	EGYPT—*cont.*															
	Infantry Regiments—cont.												days.	days.		
2nd	Royal Irish Rifles - -	187	137	—	—	—	7	10·58	732·6	—	37·43	56·58	20·65	28·19	Cairo, 3 months. To Malta, 31st March.	3
	Mounted Infantry - -	115	211	1	—	1	—	7·24	1834·8	8·70	—	62·96	22·96	13·52	Abbassiyeh, 12 months. (Detachments from various Infantry Battalions.)	Various
	Total - - -	2,515	2,784	11	1	12	61	166·71	1107·0	4·37	24·25	66·29	24·19	21·86		
	Garrison Staff and Departments.															
	Army Service Corps - -	53	31	2	—	2	1	1·87	596·2	38·46	19·23	35·96	13·13	22·02		
	Medical Staff Corps - -	82	35	1	1	2	4	1·81	426·8	24·39	48·78	22·07	8·06	18·88		
	Ordnance Store Corps - -	54	14	1	—	1	—	·60	259·3	18·52	—	11·11	4·06	15·64	Cairo and Alexandria, 12 months -	„
	Military Police - - -	74	29	1	—	1	—	1·29	391·9	13·51	—	17·43	6·36	16·24		
	General Staff, &c. - -	17	5	—	—	—	—	·16	294·1	—	—	9·41	3·43	11·68		
	Total - - -	279	114	5	1	6	5	5·73	408·6	17·92	17·92	20·54	7·50	18·35		
	Grand Total -	3,172	3,141	21	2	23	71	185·47	990·2	7·25	22·38	58·47	21·34	21·55		

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ABSTRACT No. XLI.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the ADMISSIONS, MORTALITY, and INVALIDING in each CORPS serving in the BENGAL COMMAND during the Year 1891.

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Daily Average Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				
CAVALRY.										days.	days.		yrs. mo.
1st (King's) Dragoon Guards	365	459	8	6	28·74	1257·5	21·92	16·44	78·74	23·74	22·85	Muttra, 9 months (left for England on the 29th September 1891).	11 0
2nd „ „ -	536	986	7	26	53·21	1839·6	13·06	48·51	99·27	36·23	19·70	Sialkot, 12 months; Dett., Camp Topa, 5 months -	6 0
3rd „ „ -	562	811	7	30	33·66	1443·1	12·46	53·38	59·89	21·86	15·15	Rawal Pindi, 12 months; Dett., Camp Topa, 5 months.	7 2
7th „ „ -	541	683	5	15	35·65	1262·5	9·24	27·73	65·90	24·05	19·05	Umballa, 10 months; Meerut, ½ month; marching, 1½ months.	7 11
5th Lancers - - -	606	920	15	27	45·97	1518·2	24·75	44·55	75·86	27·69	18·24	Meerut, 11 months; marching, 1 month - -	3 0
16th „ - - -	554	758	8	9	48·53	1422·4	14·48	16·25	87·69	32·01	22·50	Lucknow, 10 months; Meerut, ½ month; marching, 1½ months.	1 3
18th Hussars - - -	116	211	5	—	9·76	1819·0	43·10	—	84·14	30·71	16·88	Muttra, ⅔ month; Meerut, ½ month; marching, 1 month (arrived from Mhow on the 31st October 1891).	2 0½
Total - - -	3,280	4,858	55	113	255·57	1481·1	16·77	34·45	77·92	28·44	19·20		
ROYAL ARTILLERY.													
A Battery, R.H.A. - -	146	236	1	9	13·93	1616·4	6·85	61·64	95·41	34·82	21·54	Meerut, 10 months; marching, 2 months - -	2 2
B „ „ - -	146	266	1	7	10·62	1821·9	6·85	47·95	72·74	26·55	14·57	Meerut, 8½ months; marching, 3½ months - -	2 2

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Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength. Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.	Average Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
										days.	days.		yrs. mo.
ROYAL ARTILLERY—*cont.*													
C Battery, R.H.A.	160	250	2	4	11·99	1562·5	12·50	25·00	74·94	27·35	17·51	Umballa, 9¼ months; Meerut, ¾ month; marching, 2¼ months; Dett., Kassuli, 12 months.	2 2
H " "	152	221	1	8	9·46	1453·9	6·58	52·63	63·24	23·73	15·62	Sialkot, 11 months; marching, 1 month -	2 2
K " "	30	60	—	—	2·79	2000·0	—	—	93·00	33·35	16·97	Lucknow, 2¾ months (arrived from England on the 21st October 1891).	0 2
P " "	119	130	2	8	9·36	1092·4	16·81	67·23	78·66	23·71	23·23	Lucknow, 9¼ months (left for England on the 12th October 1891).	13 10
Q " "	150	186	1	2	8·68	1240·0	6·67	13·33	57·87	21·12	17·03	Umballa, 9¼ months; Meerut, ¾ month; marching, 2¾ months.	11 0
T " "	160	220	7	2	15·01	1457·5	43·75	12·50	93·81	34·24	23·33	Rawal Pindi, 9¾ months; marching, 2¾ months -	13 1¼
2nd Field Battery, R.A.	155	151	5	5	9·10	974·2	32·26	32·26	58·71	21·43	23·00	Agra, 10¼ months; Lucknow, ¾ month; marching, 1¾ months.	10 11¼
6th " "	23	46	—	—	1·88	2067·0	—	—	81·74	29·83	14·30	Sangor, 2 months (arrived from England on the 2nd November 1891).	0 2
8th " "	187	266	3	3	15·34	1422·5	16·04	16·04	88·03	32·24	21·05	Rawal Pindi, 1 month; Ferozepore, 9 months; Meean Meer, 1 month; marching, 1 month.	10 11¼
9th " "	143	210	7	5	15·11	1468·5	48·95	34·97	105·66	38·57	26·26	Cawnpore and Camp Jajmow, 11 months; Lucknow, ¾ month; marching, ¾ month.	8 2
10th " "	135	253	1	—	14·81	1874·1	7·41	—	109·70	40·04	21·37	Mooltan, 11¾ months (arrived from Karachi on the 14th January 1891).	7 2
15th " "	156	207	3	—	9·76	1328·9	19·23	—	62·56	22·84	17·21	Peshawar, 10½ months; marching, 1¾ months -	4 0
22nd " "	153	183	4	7	13·17	1196·1	26·14	45·75	79·54	29·03	24·27	Bareilly and Camp Rampur, 11¼ months; marching, ¾ month.	5 0
24th " "	146	294	—	4	18·22	2013·7	—	27·40	124·79	45·55	22·62	Jhansi, 12 months - - - -	1 2
31st " "	153	261	1	10	13·28	1836·6	6·54	65·36	80·26	29·30	15·95	Calcutta, 1 month; Barrackpore, 10 months; marching, 1 month.	3 2
34th " "	154	246	4	4	17·28	1597·4	25·97	25·97	112·21	40·96	25·64	Allahabad and Camp Dandi, 12 months -	1 2

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Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				
										days.	days.		yrs. mo.
ROYAL ARTILLERY—*cont.*													
39th Field Battery, R.A. -	154	311	3	1	10·30	2019·5	19·48	6·49	66·88	24·41	12·09	Meean Meer and Camp Muridki, 12 months -	10 11½
43rd „ „ -	164	183	2	4	11·50	1115·9	12·20	24·39	70·12	25·59	22·94	Lucknow, 10½ months; marching, 1½ months -	11 0
44th „ „ -	144	229	7	7	14·34	1590·3	48·61	48·61	99·58	36·35	22·86	Jubbulpore, 9½ months; marching, 2½ months -	11 0
46th „ „ -	149	268	1	4	16·70	1798·7	6·71	26·85	112·08	40·91	22·74	Fyzabad, 11½ months; Lucknow, ½ month; marching, ½ month.	1 2
50th „ „ -	155	335	—	4	16·39	2161·3	—	25·81	105·74	38·60	17·86	Campbellpore, 11½ months; Rawal Pindi, ½ month	5 0
51st „ „ -	151	348	2	5	17·27	2304·6	13·25	33·11	114·37	41·75	18·11	Dinapore, 12 months - - - - - -	1 2
54th „ „ -	149	326	3	1	16·35	2187·9	20·13	6·71	109·73	40·05	18·31	Nowgong, 11½ months; Jhansi, ½ month; marching, ½ month.	1 2
60th „ „ -	153	307	5	8	18·68	2006·5	32·68	52·29	122·09	44·56	22·21	Meean Meer, 1 month; Rawal Pindi, 9½ months; marching, 1½ months.	5 0
65th „ „ -	152	316	2	3	10·36	2078·9	13·16	19·74	68·16	24·88	11·97	Meean Meer and Camp Muridki, 12 months -	11 0
68th „ „ -	127	329	4	1	16·05	2590·6	31·50	7·87	126·38	46·13	17·81	Meean Meer, 1½ months; Jullundur, 9 months; marching, 1½ months.	10 11½
70th „ „ -	137	201	2	4	10·51	1467·2	14·60	29·20	76·72	28·00	19·09	Meerut, 12 months - - - - - -	5 1½
71st „ „ -	139	177	2	1	9·47	1273·4	14·39	7·19	66·13	24·87	19·53	Meerut, 11½ months; marching, ½ month - -	4 0
78th „ „ -	118	263	1	3	10·28	2228·8	8·47	25·42	87·12	31·80	14·27	Saugor, 10 months (left for England on the 28th October, 1891).	12 11½
No. 1 Mountain Battery, R.A.	83	98	1	2	5·86	1180·7	12·05	24·10	70·60	25·77	21·83	Rawal Pindi and Camp Daghul, 3¾ months; Khyra Gully, 4¼ months; marching, 1½ months (Hazara, 2½ months, from 29th March to 11th June).	8 2
„ 2 „ „	6	26	2	—	·93	4333·3	333·33	—	155·00	56·57	13·06	Umballa, 25 days (arrived from Mandalay on the 7th December, 1891).	5 11

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Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				
ROYAL ARTILLERY—*cont.*										days.	days.		yrs. mo.
No. 3 Mountain Battery, R.A.	84	82	2	5	4·67	976·2	23·81	59·52	55·60	20·29	20·79	Rawal Pindi and Camp Daghul, 2½ months; Kalabagh, 5½ months; marching, 2½ months (Miranzai, 1½ months, from 17th April to 30th May).	13 1
„ 5 „ „	99	111	3	1	8·49	1121·2	30·30	10·10	85·76	31·30	27·92	Umballa, 2 months; Jutogh, 7 months: Quetta, 2 months; marching, 1 month.	13 1
„ 6 „ „	100	89	1	—	5·33	890·0	10·00	—	53·30	19·45	21·86	Darjeeling, 10 months; marching, 2 months -	6 2
„ 7 „ „	88	88	1	—	3·06	1000·0	11·36	—	34·77	12·69	12·69	Quetta, 10 months; Calcutta, 4 days; marching, 12 days (left for Rangoon on the 16th November, 1891).	5 10
„ 8 „ „	96	62	2	2	4·95	645·8	20·83	20·83	51·56	18·82	29·14	Umballa, 5 months; Jutogh, 6½ months; marching, ½ month.	4 2
„ 9 „ „	32	37	1	1	2·02	1156·2	31·25	31·25	63·13	23·04	19·93	Rawal Pindi and Camp Daghul, 3½ months (Hazara, 8½ months; from 2nd March to 9th November).	7 2
1st Battery, Eastern Div., R.A.	9	31	—	—	2·07	3444·4	—	—	230·00	83·95	24·37	Ferozepore, 23 days (arrived from Mandalay on the 9th December, 1891).	3 0½
4th „ „ „	73	125	3	3	11·06	1712·3	41·10	41·10	151·51	55·30	32·30	Ferozepore, 10½ months (left for Mandalay on the 6th November 1891); Dett. Amritsar, 10½ months.	3 0½
8th „ „ „	110	198	3	1	11·26	1800·0	27·27	9·09	102·36	37·36	20·75	Fort Allahabad, 12 months - - - -	4 2
13th „ „ „	7	9	—	—	1·03	1285·7	—	—	145·71	53·19	41·37	Rawal Pindi, ¾ month (arrived from Burma on the 9th December 1891).	5 1½
14th „ „ „	102	159	2	6	6·35	1558·8	19·61	58·82	62·25	22·72	14·58	Rawal Pindi, 3 months; Thobba, 6 months; Fort Attock, 2 months; marching, ½ month (left for Bombay on the 9th December 1891).	10 11½
15th „ „ „	96	151	1	2	8·80	1572·9	10·42	20·83	91·67	33·46	21·27	Delhi, 12 months - - - - -	10 2
23rd „ „ „	91	129	1	2	5·16	1417·6	10·99	21·98	56·70	20·70	14·60	Jhansi, 12 months - - - - -	7 2

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Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Sick to each Time Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.				
										days.	days.		yrs. mo.
ROYAL ARTILLERY—*cont.*													
7th Battery, Southern Div., R.A.	96	124	—	1	7·79	1291·7	—	10·42	81·15	29·62	22·93	Roorkee and Camp Pur, 12 months	6 1½
20th " "	99	232	3	5	8·54	2343·4	30·30	50·51	86·26	31·49	13·44	Barrackpore and Campe Fulta and Chingrikhal, 12 months.	12 0
21st " "	101	158	1	1	9·09	1564·4	9·90	9·90	90·00	32·85	21·00	Calcutta and Camp Fulta, 12 months	2 1½
22nd " "	90	189	—	4	11·07	2100·0	—	44·44	123·00	44·89	21·38	Campbellpore, 11½ months; Rawal Pindi, ½ months; marching, ½ month.	4 2
24th " "	133	126	1	3	8·05	947·4	7·52	22·56	60·53	22·09	23·32	Agra, 12 months	8 2
2nd Battery, Western Div., R.A.	14	17	2	—	1·03	1214·3	142·86	—	73·57	26·85	22·11	Quetta, 1 month 18 days (left for Bombay on the 18th February 1891).	12 2
6th " "	95	115	5	1	7·83	1210·5	52·63	10·53	82·42	30·08	24·85	Roorkee and Camp Pur 12 months	12 3
11th " "	88	132	—	1	5·63	1500·0	—	11·36	63·98	23·35	15·57	Rawal Pindi, 11 months (left for Aden on the 28th November 1891).	4 2
12th " "	102	176	2	2	12·65	1725·5	19·61	19·61	124·02	45·27	26·23	Roorkee and Camp Pur, 12 months	12 0
16th " "	103	184	3	—	8·58	1786·4	29·13	—	83·30	30·40	17·02	Roorkee, 1½ months; Quetta, 10½ months; marching, ½ month.	4 2
20th " "	66	137	2	1	6·30	2075·8	30·30	15·15	95·45	34·84	16·78	Quetta, 9 months (arrived from Bombay on the 28th March 1891).	6 2½
Total - -	6,423	10,296	119	168	553·58	1603·0	18·53	26·16	86·19	31·46	19·62		
H. Coy. Royal Engineers -	34	27	1	2	2·01	794·1	29·41	58·82	59·12	21·58	27·17	Roorkee and Camp Pur, 12 months; Detta., Calcutta and Allahabad, 12 months.	24 0
INFANTRY.													
2nd R.W. Surrey Regiment -	948	946	14	18	53·23	997·9	14·77	18·99	56·15	20·49	20·54	Umballa, 3½ months; Solon, 6½ months; Dinapore, 1½ months; marching, ½ month; Dett. Dagshai, 6 months, and Kasauli, 12 months.	13 10

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Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.	Average Time			
INFANTRY—*cont.*										days.	days.		yrs. mo.
1st East Kent Regiment -	952	1,466	9	37	89·18	1539·9	9·45	38·87	93·68	34·19	22·20	Calcutta, 12 months; Detts., Dum Dum, and Darjeeling, 12 months.	4 9
2nd Northumberland Fusiliers	966	1,100	33	7	57·94	1115·6	33·47	7·10	58·76	21·45	19·23	Nowshera and Camp Hoti Mardau, 5½ months; Peshawar, 6¼ months; marching, ⅝ month; Detts., Cherat, 5 months, and Fort Attock, 11 months.	11 11
2nd Royal Warwickshire Regt.	843	1,264	9	17	80·60	1501·2	10·69	20·19	95·72	34·94	23·27	Mooltan, 11 months 24 days (left for England on the 24th December 1891); Dett., Dalhousie, 12 months.	13 2
1st Royal Fusiliers - -	739	1,382	4	5	34·30	1870·1	5·41	6·77	46·41	16·94	9·06	Quetta, 9½ months (arrived from Poona on the 16th March 1891).	3 11½
2nd (King's) Liverpool Regiment.	659	1,072	6	26	63·30	1626·7	9·10	39·45	96·05	35·06	21·55	Dinapore, 10 months and 6 days (left for Aden on the 6th November 1891); Dett., Gnathong, 10 months.	14 2
2nd Lincolnshire Regiment -	968	1,053	19	12	84·14	1122·6	20·26	12·79	89·70	32·74	29·17	Cawnpore and Sanitary Camp, 11½ months; Bareilly, ½ month; marching, ½ month; Wing, Chakrata, 7 months.	9 11
1st Suffolk Regiment -	849	1,423	5	9	71·90	1676·1	5·89	10·60	84·69	30·91	18·44	Jhansi, 12 months; Wing, Nowgong, 12 months; Dett. Sipri, 12 months.	15 2
2nd West Yorkshire Regiment	959	770	7	9	54·12	820·0	7·45	9·58	57·64	21·04	25·65	Umballa, 2½ months; Dagshai, 7½ months; Lucknow, ½ month; marching, 1⅜ months; Dett., Dagshai, 2½ months.	13 2
1st Bedfordshire Regiment -	719	968	29	6	61·08	1346·3	40·33	8·34	84·95	31·01	23·03	Rawal Pindi, 11⅓ months (arrived from Malta on the 20th January 1891).	1 0
2nd Royal Irish Regiment -	822	1,412	26	28	102·46	1717·8	31·63	34·06	124·65	45·50	26·49	Lucknow, 10 months; marching, 2 months; Dett., Fatehgarh, 2 months.	6 11
2nd Royal Scots Fusiliers -	909	1,056	12	11	61·03	1161·7	13·20	12·10	67·14	24·52	21·09	Peshawar, 5⅔ months; Cherat, 6 months; marching, ½ month; Depôt, Peshawar, 6 months.	9 11
1st Royal Welsh Fusiliers -	585	409	7	3	24·73	699·1	11·97	5·13	42·27	15·43	22·07	Peshawar, 3⅔ months; marching, ⅛ month (Hazara, 7⅓ months; from 10th March to 28th October); Dett., Cherat, 5½ months; Depôt, Peshawar, 8⅛ months.	11 3½

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Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Daily Sick.	Ratio per 1,000 of Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.	Average Time			
INFANTRY—*cont.*										days.	days.		yrs. mo.
2nd South Wales Borderers	925	1,536	40	11	99·77	1660·5	43·24	11·89	107·86	39·37	23·71	Allahabad and Camp **Dabhama, 12 months**; Dett., Fort Allahabad, 12 **months.**	11 4
2nd King's Own Scottish Borderers.	939	855	1	13	56·72	910·5	1·06	13·84	60·40	22·05	24·21	Umballa, 2⅔ months; **Subathu, 7 months**; **Meean** Meer, 1⅓ months; **Detta., Jutogh and Simla,** 9⅔ months.	11 11½
2nd Scottish Rifles'	851	991	17	39	67·79	1164·5	19·98	45·83	79·66	29·08	24·97	Lucknow, 10 **months**; **Jubbulpore, 1 month**; **marching, 1 month**; **Dett., Fatehgarh, 8 months.**	12 1½
1st East Lancashire Regiment	926	1,328	12	20	70·85	1434·1	12·96	21·60	76·51	27·93	19·47	Sitapur, 9⅔ months; Lucknow, 2 months; marching, ⅓ month; Wing, Benares, 12 months.	11 0
1st East Surrey „	948	2,004	25	41	102·02	2113·9	26·37	43·25	107·62	39·28	18·58	Calcutta, 1 month; Dum Dum, 11 months; Dett., Barrackpore, 12 months.	6 11½
2nd Border Regiment	934	853	4	11	61·56	913·3	4·28	11·78	65·91	24·06	26·34	Meerut, 2½ months; Chakrata, 7 months; Meean Meer, 1 month; marching, 1⅓ months.	1 10
2nd Royal Sussex Regiment	952	1,299	9	10	56·45	1364·5	9·45	10·50	59·30	21·64	15·86	Ferozepore, 10⅔ months; Meean Meer, 1 month; **marching**, ⅔ month; Dett., Dalhousie, 12 **months.**	6 0
1st Hampshire „	741	930	17	17	63·51	1295·5	22·94	22·94	85·71	31·28	24·15	**Bareilly** and Camp Rampur, 10 months 24 days (arrived from Rangoon on the 5th February 1891); Dett., Moradabad, 10½ months; Ranikhet, 6 months.	5 11
2nd Derbyshire „	922	1,480	15	31	84·28	1605·2	16·27	33·62	91·41	33·36	20·79	Jubbulpore, 11 months; Umballa, 29 days; marching, 2 days; Dett. Saugor, 12 months; Pachmarhi, 12 months.	9 2
2nd King's Own Yorkshire Light Infantry.	157	118	—	2	17·62	751·6	—	12·74	112·23	40·96	54·50	Quetta, 2½ months (left for Bombay on the 9th March 1891).	4 10
1st King's Royal Rifle Corps	727	656	16	1	36·72	902·3	22·01	1·38	50·51	18·44	20·43	Rawal Pindi, 3⅔ months; Camp Gharial, 5½ months; marching, ½ month (Miranzai, 2 months, from 27th March to 23rd May; arrived from England on the 10th January 1891).	1 0
2nd Wiltshire Regiment	915	1,747	16	30	75·02	1909·3	17·49	32·79	81·99	29·93	15·67	Meean Meer, 10⅔ months; marching, 1⅓ months; Dett., Dalhousie, 12 months; Lahore, 10⅔ **months.**	9 11

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Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Daily Average Sick.	Ratio per 1,000 of Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Daily Sick.	Average Time			
INFANTRY—*cont.*										days.	days.		yrs. mo.
2nd Manchester Regiment	944	1,811	7	46	86·96	1918·4	7·42	48·73	92·12	33·62	17·53	Sialkot, 12 months; Detts., Amritsar, 5½ months; and Thobba, 5½ months.	9 2
2nd Durham Light Infantry	945	1,567	19	8	69·82	1658·2	20·11	8·47	73·88	26·97	16·26	Quetta and Camp Hanna Pass, 12 months	4 10
2nd Highland „ „	801	1,292	15	20	73·11	1613·0	18·73	24·97	91·27	33·31	20·65	Fyzabad, 9 months; Lucknow, ½ month; marching, 2½ months; Depôt, Fyzabad, 3 months.	7 2
2nd Seaforth Highlanders	794	862	1	9	51·48	1085·6	1·26	11·34	64·84	23·67	21·80	Rawal Pindi, 3½ months; Kuldunnah, 5 months; marching, ½ month (Hazara, 3½ months, from 2nd March to 11th June).	12 9½
1st Royal Irish Fusiliers	972	1,494	13	29	80·95	1537·0	13·52	29·84	83·28	30·40	19·78	Meerut, 12 months; Dett., Delhi, 12 months; Chakrata, 7 months; and Landour, 12 months.	8 2
1st Leinster Regiment	910	1,400	8	23	91·12	1538·5	8·79	25·27	100·13	36·55	23·76	Agra, 12 months	14 1½
2nd Royal Munster Fusiliers	923	1,308	13	23	85·15	1417·1	14·08	24·92	92·25	33·67	23·76	Bareilly, 2½ months; Chaubuttia, 7½ months; Shahjahanpur, ½ month; Lucknow, ½ month; marching, ½ month.	7 9
1st Bn. Rifle Brigade	937	1,195	8	23	80·22	1275·3	8·54	24·55	85·61	31·25	24·50	Bareilly and Camp Rampur, 3⅔ months; Ranikhet, 8 months; marching, ½ month.	11 3½
3rd „ „	950	1,090	20	13	71·44	1147·4	21·05	13·68	75·20	27·45	23·92	Meean Meer, 1⅔ months; Jullunder, 9⅔ months; marching, ⅔ month; Dett., Amritsar, 8 months; Bhagsu, 6½ months; and Dalhousie, 13 months; Depôt, Jullundur, 2⅔ months.	2 10
Total	29,000	40,167	461	608	2320·57	1385·1	15·90	20·97	80·02	29·21	21·09		
Garrison Staff and Departments.	1,418	1,347	40	118	133·88	949·9	28·21	83·22	94·41	34·46	36·28	Various station hospitals.	
Men of various Corps, marching.	43	13	5	—	1·41	302·3	116·28	—	32·79	11·97	39·59	Various station hospitals.	
Grand Total	40,198	56,708	631	1,009	2267·02	1410·7	16·94	25·10	81·27	29·66	21·03		

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ABSTRACT No. XLII.—TABLE, taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the ADMISSIONS, MORTALITY, and INVALIDING in each CORPS serving in the MADRAS COMMAND during the Year 1891.

Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.
						Admissions into Hospital.	Deaths.	Invalids.	Average Constantly Sick.				
CAVALRY.										days.	days.	months.	yrs. mo.
7th Hussars - - -	437	555	2	14	31·86	1270·0	4·57	30·04	72·91	26·61	20·95	Secunderabad: left 24th October, 1891 - 10	5 0
19th „ - - -	132	282	—	—	12·31	2136·4	—	—	93·26	34·04	15·93	Bangalore; arrived 27th November, 1891 - 1	0 3
21st „ - - -	603	587	4	18	43·75	973·5	6·63	29·85	72·55	26·48	27·20	Secunderabad, 1; Bangalore, 11 - 12	4 0
Details Cavalry - - -	12	5	—	—	·86	416·7	--	—	71·67	26·16	62·78		
Total - - -	1,184	1,429	6	32	88·78	1206·9	5·07	27·02	74·98	27·37	22·67		
ROYAL ARTILLERY.													
M. By., Royal Horse Artillery -	145	127	5	—	11·71	875·9	34·48	—	80·76	29·48	33·65	Secunderabad - - - - - 12	5 11
S. „ „ „ -	156	165	4	5	11·55	1057·7	25·64	32·05	74·04	27·02	25·55	Bangalore; arrived 8th January, 1891 - 12	6 0
5th Field By., Royal Artillery	156	197	1	2	9·72	1262·8	6·41	12·82	62·31	22·74	18·01	St. Thomas' Mount; arrived from Kamptee, 17th February, 1891 - - - - 11	8 0
19th „ „ -	154	124	2	7	8·91	805·2	12·99	45·45	57·85	21·12	26·22	Bangalore - - - - - - 12	12 0
21st „ „ -	168	294	3	3	16·51	1750·0	17·86	17·86	98·27	35·87	20·50	Bellary - - - - - - 12	6 0
23rd „ „ -	24	35	—	—	1·58	1458·3	—	—	65·83	24·03	16·47	Bangalore; arrived 3rd November, 1891 - 2	0 2
33rd „ „ -	25	37	—	—	1·68	1480·0	—	—	67·20	24·53	16·57	Secunderabad; arrived 1st November, 1891 - 2	0 2

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Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Years of Service in India.	
						Admissions into Hospital.	Deaths.	Invalids.	Average Constantly Sick.					
										days.	days.		months.	yrs. mo.
ROYAL ARTILLERY—*cont.*														
38th Field By., Royal Artillery	118	63	—	1	4·78	533·9	—	8·47	40·51	14·78	27·69	Secunderabad; left 29th October, 1891	10	13 0
42nd „ „	152	221	4	1	11·58	1453·9	26·31	6·58	76·18	27·81	19·12	St. Thomas' Mount; arrived from Nasirabad, 10th February, 1891	11	5 0
49th „ „	32	35	1	—	1·57	1093·7	31·25	—	49·06	17·90	16·37	Secunderabad; 9th October, 1891	2	0 2
61st „ „	124	148	2	7	12·47	1193·5	16·14	56·45	100·56	36·70	30·75	Bangalore; left 27th October, 1891	10	12 10
76th „ „	137	157	2	10	8·92	1146·0	14·59	72·99	65·11	23·76	20·73	Belgaum; arrived 15th February, 1891	11	12 0
79th „ „	136	91	—	—	6·74	669·1	—	—	49·56	18·09	27·03	Secunderabad; left 15th October, 1891	10	13 0
No. 2 Mountain Battery, R.A.	72	139	3	3	10·30	1930·5	41·66	41·66	143·05	52·21	27·05	Mandalay; left 24th November, 1891	11	5 0
No. 7 „ „ „	8	26	—	—	1·15	3250·0	—	—	143·75	52·47	16·14	Mandalay, arrived 24th November 1891	1	5 0
No. 1 By., Eastern Div., R.A.	78	201	1	8	15·23	2576·9	12·82	102·56	195·13	71·27	27·65	Mandalay; left 24th November, 1891	12	3 0
No. 4 „ „ „	8	36	—	—	1·10	4500·0	—	—	137·50	50·19	11·15	Rangoon, 2; Thayetmyo, 10	12	3 0
No. 13 „ „ „	100	149	2	8	11·08	1490·0	20·00	80·00	110·80	40·44	27·14	Thayetmyo; left 24th November, 1891	11	5 2
No. 21 „ „ „	123	147	2	2	10·06	1195·1	16·26	16·26	81·78	29·85	24·98	Fort St. George; left 16th December, 1891	2	10 0
No. 22 „ „ „	94	60	—	1	5·39	638·3	—	10·63	57·34	20·93	32·78	Secunderabad	12	10 0
No. 5 „ Southern Div., R.A.	9	34	—	—	1·28	3777·8	—	—	142·22	51·91	13·74	Rangoon; arrived 11th November, 1891	12	4 0
No. 9 „ „ „	106	149	5	5	14·19	1405·7	47·17	47·17	133·87	48·86	34·76	Fort St. George, 1; Rangoon, 11	12	4 0
No. 18 „ „ „	9	15	—	—	0·67	1666·7	—	—	74·44	27·17	16·30	Rangoon; arrived 21st November, 1891	2	2 0

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Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.		Years of Service in India.	
						Admissions into Hospital.	Deaths.	Invalids.	Average Constantly Sick.	Average Time					
Details Royal Artillery -	54	27	—	3	4·48	500·0	—	55·55	82·26	30·28	60·56				
Total - -	2,188	2,677	37	66	182·65	1223·5	16·91	30·16	83·48	30·47	24·90				
ROYAL ENGINEERS.															
K. Company, Royal Engineers	34	10	4	—	·89	294·1	117·65	—	26·18	9·55	32·48	Bangalore - - - - -	months. 12	yrs. mo 16	0
INFANTRY REGIMENTS.															
1st Bn. Norfolk Regiment -	916	1,335	8	19	79·71	1457·4	8·73	20·74	87·02	31·76	21·79	Rangoon, 11; Wellington, 1; (Dett. at Port Blair) - - - - -	12	2	10
2nd Bn. Devonshire Regiment	903	1,338	25	13	57·88	1481·7	27·68	14·40	64·10	23·39	15·78	Shwebo (Dett. at Bhamo and Bernardmyo)	12	14	0
2nd Bn. Suffolk Regiment -	619	670	3	—	36·60	1082·4	4·84	—	59·12	21·58	19·94	Wellington (Detts. at Cannanore, Calicut, and Malapuram); arrived 8th March 1891 -	10	0	10
2nd Bn. Somersetshire L. I. -	986	1,292	20	16	74·17	1380·3	21·37	17·09	79·24	28·92	20·95	Fort St. George and Wing at Bellary -	12	13	9
2nd Bn. Bedfordshire Regiment.	698	528	7	7	44·54	756·4	10·03	10·03	63·81	23·29	30·79	Secunderabad - - - - -	12	15	10
2nd Bn. Yorkshire Regiment -	856	1,295	7	17	97·25	1513·3	8·18	19·86	113·61	41·47	27·41	Bangalore - - - - -	12	2	0
1st Bn. Cheshire Regiment -	942	902	4	27	58·08	957·5	4·24	28·66	61·06	22·50	23·50	Belgaum and Thayetmyo - - -	12	4	2
2nd Bn. Royal Inniskilling Fus.	801	869	11	14	60·90	1084·9	13·73	17·48	76·03	27·74	26·81	Secunderabad - - - - -	12	2	11

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Corps.	Average Annual Strength.	Admitted into Hospital.	Deaths in the Command.	Invalided.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Sick each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.		Years of Service in India.	
						Admissions into Hospital.	Deaths.	Invalids.	Average Constantly Sick.	Average Time to					
										days.	days.			months.	yrs. mo.
INFANTRY REGIMENTS—*cont.*															
1st Bn. Duke of Corn. L. I.	827	1,482	13	66	99·25	1792·0	15·72	79·80	120·01	43·80	24·44	Fort Dufferin	12	3	10
1st Bn. Hampshire Regiment	89	110	—	7	8·95	1235·9	—	78·65	100·56	36·70	29·69	Rangoon (left 28th January 1891)	1	5	11
2nd Bn. Oxfordshire L. I.	767	992	16	26	60·17	1293·3	20·86	33·89	78·45	28·63	22·14	Toungoo (Dett. at Meiktila)	12	5	9
4th Bn. King's Royal Rifles	646	1,380	19	15	62·03	2136·2	29·41	23·22	96·02	35·04	16·40	Thayetmyo (Dett. at Myingyan)	12	16	0
Details Infantry Regiments	141	111	—	18	17·44	787·2	—	127·66	123·68	45·14	57·35				
Total	9,141	12,264	133	245	756·97	1341·6	14·55	26·82	82·81	30·22	22·59				
CONVALESCENT DEPÔTS.															
Poonamallee	108	211	5	55	25·25	1953·7	46·30	509·25	233·79	85·33	43·68				
Wellington	373	488	—	16	37·17	1308·3	—	42·89	99·65	36·37	27·80				
Total	481	699	5	71	62·42	1453·2	10·39	147·61	129·77	47·37	32·59				
Garrison Staff and Departments.	228	120	3	1	13·51	526·3	13·15	4·38	59·25	21·62	41·09				
Grand Total	13,256	17,199	188	415	1105·22	1297·4	14·18	31·31	83·37	30·43	23·45				

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ABSTRACT No. XLIII.—TABLE taken from the REPORT of the PRINCIPAL MEDICAL OFFICER, showing the ADMISSIONS, MORTALITY, and INVALIDING in each CORPS serving in the BOMBAY COMMAND during the Year 1891.

Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Sick to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in the Command.
						Admitted.	Died.	Invalided.	Constantly Sick.	Average Time			
CAVALRY.										days.	days.		
7th Hussars - - -	122	142	1	—	8·00	1163·9	8·20	—	65·57	23·93	20·56	Mhow, 3 months (arrived from Secunderabad) -	5
18th „ - - -	444	490	7	17	33·00	1103·6	15·76	38·29	74·32	27·13	24·58	Mhow, 10 months (left for Muttra) - - -	2
Total - -	566	632	8	17	41·00	1116·6	14·13	30·03	72·44	26·44	23·68		
ROYAL ARTILLERY.													
N. Royal Horse Artillery -	150	219	1	7	12·00	1460·0	6·67	46·67	80·00	29·20	20·00	Mhow, 12 months - - - - -	6
R. „ „ -	147	119	—	1	6·96	809·5	—	6·80	47·35	17·28	21·35	Kirkee, 12 months - - - - -	14
17th Field Battery, R.A. -	158	231	8	1	11·46	1462·0	50·63	6·33	72·53	26·47	18·11	Neemuch, 12 months - - - - -	8
20th „ „ -	120	255	2	—	11·85	2125·0	16·67	—	98·75	36·04	16·96	Kamptee, 10 months (arrived from St. Thomas' Mount).	12
26th „ „ -	127	223	1	3	16·14	1755·9	7·87	23·62	127·09	46·39	26·42	Kirkee, 2 months; Ahmednagar, 10 months -	8
27th „ „ -	123	237	2	10	16·53	1926·8	16·26	81·30	134·39	49·05	25·46	Ahmedabad, 10 months; Kirkee, &c., 2 months -	4
28th „ „ -	129	178	1	4	7·93	1379·8	7·75	31·01	61·47	22·44	16·26	Karachi, 11 months (arrived from Mooltan and left for England).	14
35th „ „ -	127	112	1	4	7·04	881·9	7·87	31·50	55·43	20·23	22·94	Kirkee, 10 months; on the march, &c., 2 months	3
36th „ „ -	119	168	2	7	9·82	1411·8	16·81	58·82	82·52	30·12	21·33	Hyderabad, 10½ months; Kirkee, and on march, 1½ months.	4

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Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Sick Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in the Command.
						Admitted.	Died.	Invalided.	Constantly Sick.				
										days.	days.		
ROYAL ARTILLERY—*cont.*													
47th Field Battery, R.A.	11	20	—	—	·50	1818·2	—	—	45·45	16·59	9·12	Karachi, 1 month (arrived from England)	—
48th „ „	155	239	8	1	9·22	1541·9	51·61	6·45	59·48	21·71	14·08	Nasirabad, 12 months	4
53rd „ „	142	138	—	2	8·08	971·8	—	14·08	56·90	20·77	21·37	Kirkee, 10 months; Hyderabad, and on march, 2 months.	6
55th „ „	141	135	1	4	7·67	957·4	7·09	28·37	54·40	19·85	20·74	Kirkee, 11 months	3
59th „ „	123	155	5	3	7·29	1260·2	40·65	24·39	59·27	21·63	17·17	Neemuch, 10½ months (arrived from St. Thomas' Mount).	7
72nd „ „	111	93	—	1	3·38	837·8	—	9·01	30·45	11·11	13·26	Deesa, 10 months; on the march, 2 months	3
14th Eastern Division, R.A.	3	11	—	—	·21	3666·7	—	—	70·00	25·55	6·97	Colaba, ¼ month (arrived from Rawal Pindi)	11
21st „ „	4	9	—	—	·17	2250·0	—	—	42·50	15·51	6 89	Kirkee, ¼ month (arrived from Madras)	10
2nd Western Division, R.A	79	143	—	—	7·95	1810·1	—	—	100·63	36·73	20·29	Kirkee, 7 months (arrived from Quetta)	12
11th „ „	5	16	—	—	·40	3200·0	—	—	80·00	29·20	9·12	Aden, ¼ month (arrived from Rawal Pindi)	4
13th „ „	90	95	—	1	6·00	1055·5	—	11·11	66·67	24·33	23·05	Mhow, 12 months	12
15th „ „	103	119	—	4	4·50	1155·3	—	38·83	43·69	15·95	13·80	Aden, 12 months	13
22nd „ „	21	31	1	2	2·00	1476·2	47·62	95·24	95·24	34·76	23·55	Colaba, 2½ months (left for Quetta)	6
3rd Southern Division, R.A.	117	158	—	6	8·75	1350·4	—	51·28	74·79	27·30	20·21	Colaba, 12 months	10
5th „ „	79	100	2	5	5·20	1265·8	25·32	63·29	65·82	24·05	18·98	Aden, 9 months (left for Mandalay)	4
11th „ „	113	138	—	3	7·63	1221·2	—	26·55	67·52	24·64	20·18	Colaba, 12 months	2

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Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Sick each	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in the Command.
						Admitted.	Died.	Invalided.	Constantly Sick.	Average Time to Soldier.			
										days.	days.		
ROYAL ARTILLERY—*cont.*													
18th Southern Division, R.A.	84	98	—	6	5·06	1166·7	—	71·43	60·24	21·99	18·84	Karachi, 10 months (left for Rangoon)	2
Total	2,581	3,440	35	75	183·74	1,332·8	13·56	29·06	71·19	25·98	19·49		
Royal Engineers	31	17	—	1	·24	548·4	—	32·26	7·74	2·82	5·15		
INFANTRY.													
2nd Royal Lanc. Regt.	906	1,048	4	19	67·31	1156·7	4·41	20·97	74·29	27·12	23·44	Karachi, 1 month; Ahmednagar, 11 months	12
1st Royal Fusiliers	148	108	—	16	10·10	729·7	—	108·11	68·24	24·91	34·13	Poona, 1½ months (left for Quetta)	4
2nd Lancashire Fusiliers	884	1,175	13	10	66·68	1329·2	14·70	11·31	75·43	27·53	20·71	Kirkee, 1½ months; Poona, 10½ months	11
1st Worcestershire Regiment	907	1,153	10	10	86·72	1271·2	11·02	11·02	95·61	34·90	27·45	Poona, 12 months	13
1st Loyal N. Lanc. Regiment	882	1,656	21	19	72·95	1877·5	23·81	21·54	82·71	30·19	16·08	Kamptee, 12 months	8
2nd Gloucestershire Regiment	865	1,109	39	25	53·61	1282·1	45·09	28·90	61·98	22·62	17·64	Colaba, 2 months; Nasirabad, 10 months	11
2nd Middlesex Regiment	919	1,241	4	29	71·66	1350·4	4·35	31·56	77·98	28·46	21·08	Mhow, 12 months	11
1st Connaught Rangers	524	1,298	6	44	44·60	2477·1	11·45	83·97	85·11	31·06	12·54	Aden, 11 months (left for England)	12
2nd Royal Dublin Fusiliers	858	1,351	3	41	59·84	1574·6	3·50	47·78	69·74	25·46	16·17	Karachi, 11½ months	6
2nd (King's) Own Yorkshire L. Infantry.	667	1,113	6	10	56·40	1668·7	8·99	14·99	84·56	30·86	18·49	Colaba, 10 months (arrived from Quetta)	5
2nd King's Liverpool Regt.	68	110	—	—	3·70	1617·6	—	—	54·41	19·86	12·28	Aden, 1 month (arrived from Dinapur)	14
Total	7,628	11,362	106	223	593·57	1489·5	13·90	29·23	77·81	28·40	19·07		

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Corps.	Average Annual Strength.	Admitted into Hospital.	Died.	Invalids sent Home.	Average Number Constantly Sick.	Ratio per 1,000 of Strength.				Average Time to each Soldier.	Average Duration of each Case of Sickness.	Stations occupied during the Year.	Completed Years of Service in the Command.
						Admitted.	Died.	Invalided.	Constantly Sick.	days.	days.		
DEPÔTS, &c.													
Colaba Depôt -	107	254	3	9	15·88	2373·8	28·04	84·11	148·11	54·17	22·82	Bombay -	—
Deolalee Depôt -	785	1,031	9	8	35·81	1513·4	11·46	10·19	45·63	16·65	13·68	Deolalee -	—
Convalescents -	86	67	—	—	3·86	788·2	—	—	45·41	16·87	21·03	Khandalla	—
,, -	58	74	—	2	3·33	1275·9	—	34·48	57·41	20·96	16·48	Mount Abu	—
,, -	106	167	2	10	10·80	1575·5	18·87	94·34	101·89	37·19	23·60	Purandhur	—
,, -	39	78	4	—	4·15	2000·0	102·56	—	106·41	38·84	19·41	Taragarh	—
,, -	68	128	—	1	8·74	1882·3	—	14·70	128·53	46·91	24·92	Ghizree	—
Garrison Staff -	135	97	1	2	3·41	718·5	7·41	14·81	25·26	9·22	13·83		
Various Corps -	346	447	9	21	26·33	1291·9	26·01	60·70	81·88	29·88	23·13		
Troops on the March -	119	43	—	—	·34	361·3	—	—	2·86	1·04	2·89		
Military Prison -	68	67	4	—	3·34	985·3	58·82	—	49·12	17·93	18·19	Poona -	—
Rest Camp -	2	—	—	—	—	—	—	—	—	—	—	Khandwa	—
Total -	1,918	2,453	33	53	117·99	1278·9	16·68	27·63	61·52	22·45	17·56		
Grand Total -	12,724	17,904	181	369	936·54	1407·1	14·23	29·00	73·60	26·86	19·09		

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APPENDICES.

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APPENDIX No. I.

REPORT ON THE PROGRESS OF HYGIENE FOR THE YEAR 1892.

By Brigade-Surgeon-Lieut.-Colonel J. Lane Notter, M.A., M.D., Army Medical Staff, Professor of Military Hygiene at the Army Medical School, Netley.

The chief points in hygiene which have attracted attention during the year are as follows :—

I.—*Legislation.*

The last session of the late Parliament passed no large measure relating to sanitary reform, though several useful measures became law, such as the Alkali Works Regulation Act, the Public Libraries Act, and the Public Street Works Act. One of the most noteworty features connected with recent legislation is the satisfactory way with which the Infectious Disease (Notification) Act, 1889, has been voluntarily adopted by local authorities throughout the country. Including London, where the Act is in force without adoption, and the fifty large towns where notification is compulsory under local Acts, this system is already in force in districts having an aggregate population of upwards of 25,000,000 out of 29,001,018 inhabitants of England and Wales. The system has worked well and without friction, and has been found of the greatest service to sanitary officers in preventing the spread of infectious disease.

II.—*Literature.*

Text Book of Bacteriology.—By Carl Fraenkel, M.D. Third Edition. Translated and edited by J. H. Linsley, New York.

This work has long been the text book in the German bacteriological laboratories.

It gives in a very concise form all the more recent views and facts concerning micro-organisms, and deals with the various methods adopted for cultivating and staining them. It is an invaluable aid to the student in bacteriology. The author of the translation must be congratulated on the way he has fulfilled his task.

Practical Sanitation.—By G. Reid, M.D., D.P.H. This volume deals in a concise manner with the main principles of sanitation and their application. The chapter on sanitary law is an exceedingly useful digest of the Acts of Parliament relating to Public Health in England and Wales. The book is well adapted for the use of sanitary inspectors, and can be recommended to all who are interested in sanitary matters.

A Treatise on Hygiene and Public Health. Edited by Thomas Stevenson, M.D., and Shirley F. Murphy. Vol. I.

This volume contains sixteen treatises on different subjects by various writers.

Air is the first subject dealt with, and this is followed by a carefully prepared essay on warming and ventilation ; it is the best epitome of the subject which has yet appeared in any text book. Meteorology and climate is also an excellent chapter contributed by Mr. Symons, F.R.S. The other subjects to which special chapters are devoted are: The Influence of Climate on Health, The Influence of Soil on Health, The Dwelling, Disposal of Refuse, Inspection of Meat and Slaughter Houses, Offensive and Noxious Businesses, Food,

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Clothing, Physical Education, Baths, Hospital Hygiene, &c. The work has been compiled with great care; it is essentially a book of reference, and will be of great value to the student in sanitary science.

Hygiene and Public Health. By Louis C. Parkes, M.D. Third Edition.

This book has reached a third edition within the short period of three years.

Chapters on "smoke prevention" and "epidemic influenza" have been introduced, and the book has been brought up to date, especially those parts dealing with bacteriology and the etiology of disease.

Public Health Problems. By John F. J. Sykes, B.Sc., M.B., Edin.

This book opens with an introductory chapter, which explains the objects its author has in view. In the subsequent chapters are discussed the internal and external influences upon health, communicable diseases, preventive measures against these and urban dwellings. The object Dr. Sykes has in view is "to summarise and bring to a focus the essential points in evolution, "environment, parasitism, prophylaxis, and sanitation upon the preservation "of the public health." The latest and best information on these subjects are to be found in this work.

Report of the State Board of Health of Massachusetts. 1892.

This report is larger than any previously issued, and contains an immense amount of valuable information.

An important series of experiments upon the purification of sewage by filtration were made; it would be impossible in the space at my disposal to give even a summary of these, but they afford much valuable instruction. A paper on "The Differentiation of the Bacillus of Typhoid Fever" in water is contributed by Mr. Fuller. The author recommends a plan, easy of demonstration, to enable a bacteriologist to recognise the bacillus of enteric fever and to differentiate it from the *bacillus coli communis*. He has made a thorough investigation of the typhoid bacillus itself. The observations of its characteristics and its behaviour upon the various culture media were as follows:—

When grown on agar in tubes for one week at 20° C. it appears to be a plump bacillus with rounded ends. When grown in bouillon at blood temperature for two days it is a bacillus $1{\cdot}5 - 2{\cdot}5\ \mu$ long and $0{\cdot}5 - 0{\cdot}6\ \mu$ in diameter. Under these conditions spore formations and involution forms have never been observed. Hanging drop preparations from bouillon cultures, at blood temperature, show that the bacilli possess very lively movements both of rotation and translation. While the motility of the typhoid bacillus is one of its most marked characteristics, yet in water sewage and other sources are found species of bacteria which possess this characteristic to a very similar degree.

The typhoid bacillus can be grown in culture media at temperatures varying from 10° C. to 45°·5 C. Its optimum temperature lies between 37° C. and 39° C.

On the gelatine plate the bacillus grows and forms colonies in forty-eight to seventy-two hours, at 20° C. The colonies lying deep in the gelatine are small, while, spherical or spindle-shaped and sharply outlined. Those on the surface are larger, bluish white, with slightly irregular outline. The gelatine never liquefies.

When grown in a gelatine tube a moderately conspicuous, grey growth appears along the inoculation line, while at the surface there is a thin grey skin of irregular outline which spreads towards the wall of the tube.

When grown in sterilized milk the typhoid bacillus produces no coagulation and but a very slight amount of acid, which it is not possible to detect with litmus, but with phenolphthalein it can be shown that a slight acid fermentation takes place.

When grown in a peptone solution containing potassium nitrate the typhoid bacillus reduces the nitrate to nitrite. It is not clearly known what the reducing agents are. After many hundreds of trials upon the typhoid bacillus the test has never been known to fail if made with proper manipulation.

Dr. Theobald Smith of Washington has devised a method which has been found to be of the greatest value for the diagnosis of the typhoid bacillus. The solution used contains two per cent. glucose, one per cent. peptone, five tenths per cent. common salt, and is rendered slightly alkaline.

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Small test tubes are bent at about one inch from the closed end, forming an angle of 75°. The solution is poured into the tube till the closed arm is filled and then stands about half an inch in the open one. The tube is plugged, placed in a wire basket so that the closed arm will be in an inclined position and sterilized in the usual manner. After boiling the air in the closed arm rises to the upper end and must be removed at once to prevent re-absorption. The tubes are again placed in the basket after inoculation, so that the closed arm shall be in an inclined position.

There are three ways in which bacteria may grow in this tube: (1.) Obligate aërobes and facultative anaërobes which are not motile, do not grow at all in the closed arm. (2.) Facultative anaërobes, which are motile, grow into the closed arm, and produce a turbidity. The typhoid bacillus is an example of this class. (3.) Some facultative anaërobes, which are motile, grow into the closed arm, producing a turbidity, as do the last class; but they also liberate gas. *Bacillus coli communis* is an example.

After prolonged investigation it has been found that it is possible to separate the bacillus of typhoid fever from all other bacteria hitherto encountered.

The potato method of differentiation is, for this organism, of no diagnostic value.

The three tests, which have been found to be highly characteristic of the bacillus of typhoid fever are (after non-liquefaction): (1) non-coagulation of milk; (2) non-formation, or formation, of a very slight amount of acid in milk; (3) production of a turbidity, without gas, in Smith's test.

An excellent paper "On the geographical distribution of certain causes of Death in Massachusetts" is contributed by Dr. Samuel W. Abbott, the Secretary of the Board. His investigations afford a good illustration of the truth of Dr. Farr's statement relative to the effect or density of population in increasing the death rate from infectious disease.

First Report on the Water Research Committee: Proc. Royal Society. By Percy F. Frankland, F.R.S., and Marshall Ward, F.R.S.

This is a most valuable contribution on the bacteriology of water. It is very satisfactory to note "that the mere numbers of bacteria per cubic centremetre of water are in no case a satisfactory guide to the fitness of such water for domestic purposes." This fact has long been recognised at Netley, and no value has hitherto been assigned to the simple enumeration of micro-organisms to determine the safety or danger of a sample of water. The Appendix contains a valuable bibliography on this subject.

Hospitals and Asylums of the World. By Henry C. Burdett. 4 vols., with maps.

This is the most complete work of its kind that has ever been published. Volume III. contains an article on military hospitals. Many of these are very old buildings which have been re-constructed to suit modern requirements, and, until recently, no fixed plan was adhered to. Those which have been selected during recent years conforms almost in every country to the principles laid down by the Royal Commission on Barracks and Hospitals. The plans, which are furnished in a separate volume, are very valuable, and show at a glance the progress made in all countries of late. There is an immense amount of information contained in this work.

III.—*Work of Societies.*

The annual meeting of the British Medical Association was held at Nottingham. The Public Health Section was presided over by Sir B. Walter Foster, M.D., M.P. Dr. J. Tatham acting as chairman during his absence.

A paper on "Hospitals for Infectious Diseases" was contributed by Dr. Bulstrode. Reference was made to the new isolation hospital at Nottingham: for each patient 2,000 cubic feet of space is allowed, all space above a height of 14 feet being ignored. Small wards are also provided for doubted or other exceptional cases. No charge is made for the treatment or maintenance in hospital of ordinary cases, whatever the class to which they belonged.

Dr. E. W. Hope read a paper on "The Condemnation of Tuberculous Meat." He stated that cattle, pigs, poultry, and rarely sheep, are all liable to be affected with tubercle, but it is in cattle, and more especially in milch cows, that tuberculosis is met with.

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Opinion is practically unanimous that in the advanced stages of tuberculosis the consumption of the flesh should be prohibited, not that its consumption would always give rise to specific inoculation, but on the general principle that the flesh is so deteriorated as no longer to possess the natural qualities and properties of wholesome, nutritious meat. The most common seats of the disease are the lungs, pleura, and other serous membranes, the liver lymphatics, and other glands are also often affected. At what stage is the flesh of a tuberculous animal unfit for human consumption? The general practice in this country is to condemn any carcase in which the disease is extensive, or has progressed so far as to cause any deterioration of the flesh. In Prussia, where very great care is taken in inspecting meat, the law is to this effect: "The condition of the flesh of a tuberculous animal is to be regarded as "dangerous to health when the meat contains tuberculous nodules, or the "tuberculous animal has begun to show emaciation; while, on the other "hand, the meat is to be regarded as fit for food when the masses of tubercle "only occur in a single organ, and, in general, the beast is well nourished."

In France the rule is: "The flesh of tuberculous animals shall be excluded "from consumption (1) if the lesions are generalised, that is to say, not con-"fined; (2) if the lesions, although localised, have invaded the greater part of "an organ, or are by an eruption on the walls of the chest, or the abdominal "cavity."

In the report of the enquiry of the Departmental Committee, appointed by the Privy Council, in 1888, to inquire into the subject of tuberculosis, no case of tuberculosis in man from eating the flesh of tuberculous animals was stated, although witnesses were fully interrogated upon this point. Professor Baug, of Copenhagen, thinks that experiments show that the muscular fibre is so unfavourable a nidus for the tubercle bacilli, that they do not multiply in it. He is of opinion that the seizure of the meat of every tuberculous animal is too severe a measure, and where the lesion is localised he does not consider that the consumption of the meat is attended with danger.

The Sanitary Congress held its annual meeting at Portsmouth, commencing on September 12th. Sir Charles Cameron was elected president of the Congress, and gave the opening address. The subject was "The Victorian Era, the Age of Sanitation." Sir Charles Cameron enumerated the various Sanitary Acts passed during the present reign, and remarked that these Acts, and the amended Acts, constituted perhaps the most comprehensive code of sanitary laws ever enacted in either ancient or modern times.

In the section of Preventive Medicine, Dr. Armand Ruffer stated that the danger of propagating tuberculosis in man by infected meat was comparatively slight. He held that it was in milk that the great danger of tuberculosis was found, and also in impure air. There was, in fact, greater danger in spreading phthisis by human beings than by animals, and he recommended medical men to show their patients what were the real sources of danger.

In connection with the Congress was an excellent "Health Exhibition."

A very admirable range was exhibited by the "Economic Smokeless Fire Company." This stove really consumes its own smoke, there being practically no smoke issuing from the chimney when the fire is fed with cheap "slack" coal. The method by which this is accomplished is by carrying the air which feeds the fire in a downward direction through the whole body of the coal in the grate before allowing it to ascend the chimney. By this arrangement the oxygen of the air is brought into contact with the coal in the grate, where it enters into perfect union with the carbon, so forming carbon dioxide and ensuring complete combustion. The great advantage in this stove is the practical abolition of smoke which, in London, is undoubtedly due chiefly to domestic chimneys.

IV.—*Special Points of Hygiene.*

Filters.—In France, the War Minister has reported to the President of the Republic the results of the measures taken to reduce the prevalence of enteric fever in the army. Wherever it has been possible to substitute pure for polluted waters, or where in default of this such impure water has been systematically subjected to a filtering process by the Chamberland filter, enteric fever has practically disappeared. In the garrisons of Compiègne, Le Mans, Dumfornt,

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and many others in which this disease has long been prevalent, it has now practically disappeared, only isolated and rare cases occurring. Wherever an epidemic broke out the water supply was found to be contaminated. In 1867, the cases of enteric fever in the army reached a total of 6,881; in 1889, this total had fallen to 4,412; in 1890 to 3,491, and in 1891 to 3,225. That is to say, the number of cases of enteric fever occurring in the French Army have decreased since 1867, 52 per cent. On the 31st December 1891 statistics showed that 200,000 quarters were provided with these filters, of which 185,000 are in France and 15,000 in Algeria and Tunis. There are still 45,000 quarters to be provided with them. It is estimated that the deaths from enteric fever in 1892 will be 50 per cent. fewer than the average of 1886 and 1887, and the cases 60 per cent. fewer.

The following instructions have just been issued by the Minister for War:—

Description of the Filter.—The filter is composed of Chamberland bougies, system Pasteur, placed in concentric circles in the inside of a metallic reservoir capable of receiving water under the pressure of three atmospheres.

The water is brought under pressure to the reservoir and is forced through the filtering tubes from outside. The filtered water is received in a vessel in the form of an inverted cone placed below.

The filters in use are in four different sizes, and contain 6, 12, 25, and 50 bougies respectively.

Very detailed instructions of the methods to be adopted for cleaning and sterilising these filters are given. Special brushes are employed for this purpose, and a small furnace provided in which charcoal is burnt, and which heats a small quantity of water in the reservoir; the water is allowed to boil for 15 minutes, and the apparatus allowed to cool before being again used. Each tube is estimated to last for three years, with ordinary care.

The yield from these filters depends almost entirely on the pressure; the character of the water has also a considerable influence on the quickness of filtration. It has not been easy to calculate the yield, but experience shows that the pressure most favourable was that obtained by a height of 20 metres of water.

The following sizes have been adopted as the result of a large series of experiments:—

For 1 company of infantry, or an equivalent force -	1 filter of 12 bougies.
For 2 companies - - - - -	1 „ 25 „
For 1 battalion - - -	2 filters of 25, or 1 of 50 „

The reservoirs are made of galvanized iron, and are furnished with a cover which fits as closely as possible. Air is admitted into the reservoirs by means of a sterilised syphon.

The filters are placed above or at the side of the reservoir, the pipe to carry the flow of filtered water being on the same level as the cover of the reservoir, so that the filtered water can flow readily into them.

With each filter a reservoir is supplied having the following capacity:—

For a filter of 6 bougies - - -	75 litres.
„ 12 „ - - -	150 „
„ 25 „ - - -	300 „

These reservoirs are sterilized twice during the year. For this purpose the reservoir is separated from the filter, and a small quantity of filtered water allowed to remain in it. It is then placed over a fire on a tray and the water allowed to boil for 15 minutes. The reservoir is then emptied and put back in its place.

Independent of these periodical sterilizations the same plan is followed directly a bacteriological experiment has discovered the presence of pathogenic micro-organisms. The officers of the Medical Department are responsible for the proper working of the filters, the care and general supervision being left to individual corps. Very detailed instructions are issued to ensure a proper distribution of the filtered water to the men as well as to enforce the greatest care and cleanliness in the place in which the process of filtration is conducted.

Some interesting experiments have been made to determine the influence of sand filters on water. It will be remembered that the water from the Spree which is supplied to Berlin is filtered through sand; this water, which is very

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impure, is subjected to no other process to purify it. C. Fraenkel has shown that filtration through sand of impure river water, though it may reduce the danger of infection, especially when at a low speed, by no means removes it, and that the danger is greatest just after and just before cleaning the filters.

Air.—Attention has recently been directed to the poison in the air of inhabited houses from the combustion of coal, coke, &c. This sets free the carbon-dioxide gas and also the monoxide, a portion of which is diffused through the house air, either in the day-time or at night in almost every house where fuel is burnt. In small, diluted, gradual quantities, mixed with house-air, they interfere with normal aëration of the blood, produce anæmia and debility, or imprison the air-vesicles by excluding oxygenation. As between bacteria and coal gas, it is recommended to pay more attention to the coal gas, and thereby prevent the septicity, in which the bacillus is developed as a scavenger.

In connection with this important subject an interesting series of experiments on "the Physiological Effects of Air vitiated by Respiration" have lately been published in *The Journal of Pathology and Bacteriology* by Drs. J. Haldane and J. L. Smith. The following are the conclusions they have drawn from their research:—

1. The immediate dangers from breathing air highly vitiated by respiration arise entirely from the excess of carbonic acid and deficiency of oxygen, and not from any special poison.

2. The hyperpnœa is due to an excess of carbonic acid, and is not appreciably affected by a corresponding deficiency of oxygen. The hyperpnœa begins to appear when the carbonic acid rises to from 3 to 4 per cent. At about 10 per cent. there is extreme distress.

3. Excess of carbonic acid is likewise the cause, or least one cause, of the frontal headache produced by highly vitiated air.

4. Hyperpnœa from defect of oxygen begins to be appreciable when the oxygen in the air breathed has fallen to a point which seems to differ in different individuals.

They further point out that hitherto the rule has been to take the proportion of carbonic acid present in the air as a sufficient index of vitiation, it being assumed that measures taken for the removal of carbonic acid must be equally efficacious in getting rid of all harmful impurities. This assumption, they show, is incorrect. Air which, judged by the standard of the carbonic acid test, is sufficiently pure, may be exceedingly impure when judged by the number of micro-organisms present in it and *vice versâ*. The carbonic acid and micro-organisms have different sources. The amount of the former depends on the number of persons in the rooms as compared with the means of ventilation—that of the latter being determined by the room itself as regards cleanliness, &c. The test of smell or of feeling of comfort or discomfort in breathing the air of a room may give results equally at variance with the carbonic acid test. The practical conclusion drawn is that dilution by ordinary ventilation is not an effective means of keeping the air of rooms free from bacteria.

Infection.—Experiments have lately been made to show that flies are capable of conveying pathogenic organisms, including cholera. Dr. Sawtschenko has investigated this subject, he fed flies on broth containing cholera bacilli and also on the excreta of cholera patients. In all cases the cholera bacilli were found in the excretions of these flies, which when subsequently introduced into guinea pigs induced this disease in them.

The bacilli were found in the contents of the flies body to be in a living condition, and it is stated that they not only live but probably multiply very extensively within the body. These experiments should at least serve to attract our attention to a possible source of danger, the elimination of which is within our reach. Flies may not only disseminate the cholera virus, but may actually be the means of contributing to their growth and reproduction.

V.—*Experiments in the Hygienic Laboratory, Netley.*

Some experiments were made on the filtering power of the Berkefeld filter (système Nordtmeyer-Berkefeld). This filter is made of infusorial earth, and is on exactly the same principle as the Chamberland-Pasteur filter.

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The filter was first cleaned by the passage of large quantities of distilled water through it.

The filter being connected with a hand pump, ordinary tap water was filtered through the bougie. From the filtered water three agar-plate cultures were set, each being seeded with ·5 c.c. of the water. At the same time four similar cultures were set, each seeded with ·5 c.c. of the unfiltered water, the whole placed in an incubator and kept at 98° Fahr. for 48 hours. The results were as follows:—

No. 1 filtered water plate contained				-	-	- 8 colonies.
No. 2	,,	,,	,,	-	-	- 1 colony.
No. 3	,,	,,	,,	-	-	- No colony.
No. 1 unfiltered		,,	,,	-	-	- 12 colonies.
No. 2	,,	,,	,,	-	-	- 11 colonies.
No. 3	,,	,,	,,	-	-	- 28 colonies.
No. 4	,,	,,	,,	-	-	- 11 colonies.

A second series of experiments were made. Three similar plate cultures were set and seeded with 1 c.c. of the filtered tap water and kept in the incubator for 48 hours at 98° Fahr.

On removal and examination no growths were found.

In the third series of experiments a mixture was made by diluting one part of a very impure sewage effluent received from Dublin, with nine parts of distilled water. From this three plate cultures were made by seeding with ·5 of the mixture. The diluted sewage was then filtered through the Berkefeld filter, and three similar plate cultures were set, the whole were kept at the temperature of the room for 24 hours. At the end of that time no growths had taken place in the filtered water; they were left for three days: the unfiltered water showed innumerable colonies, while the filtered ones were free from growths.

In the fourth series a mixture was made of three parts of Dublin sewage with seven parts of distilled water. The agar cultures were prepared and seeded with ·5 c.c. of the dilute sewage, while three other similar cultures were set and seeded with ·5 c.c. of the dilute sewage after filtering through the Berkefeld filter. After being left for 24 hours in the incubator at 98° Fahr. no growths were found in the filtered sewage-seeded plates, but the plates seeded with the unfiltered mixture presented numerous colonies.

In the sixth series of experiments three agar-plate cultures were set seeded with ·5 c.c. of crude sewage effluent from Dublin, while three others were seeded with ·5 c.c. of the same after filtration through the filter. They were left in the incubator for 24 hours at 37° C. On examination at the end of that time no growths were found in the plate cultures seeded with the filtered sewage, but the other three plates had innumerable growths on and in them.

A sample of the filtered crude sewage was placed in a flask and kept at the temperature of the room for ten days, it was then examined and was found quite clear and free from smell.

These filters appear to possess distinct sterilizing action, inasmuch that they are capable of removing bacteria from samples of water and other impure liquids passed through them. Their action is practically similar to the Chamberland-Pasteur filters, but whether they possess any superiority over them is doubtful.

On the contrary, the bougies are brittle and liable to fracture when moist, and further experimental proof is required to show whether or not the frequent cleansing of the filter by brushing will not wear away the bougie too rapidly; a contingency which we know in the case of the Chamberland-Pasteur filter does not exist.

Observations made in this laboratory on the suitability and durability of this filter for military purposes go to show that the life of an individual bougie or filter is, comparatively speaking, short. The filter after much use and soaking in water loses to a large extent its tenacity and tends to become soft and friable.

These are defects vital to its adaptability for military purposes, and, so far as we know at present, the same defects are not associated with the Chamberland-Pasteur filters.

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Some experiments upon bacteria and bacteriological methods have been made by Surgeon-Captain R. H. Firth, Assistant Professor of Hygiene. The results of these he states to be as follows:—

The bacteriological work performed has been chiefly directed to the determination of specific pathogenic organisms, particularly the bacillus usually associated with enteric fever, in drinking waters, in some samples of sewage effluent received from the Royal Hibernian School, and in samples of dust taken from under the floors of rooms in the Island Bridge Barracks, Dublin, as well as some experiments upon the behaviour of the enteric fever bacillus with certain reagents for its differential diagnosis and as to its viability in potable waters.

To these may be added some observations on the bactericidal qualities and properties of chloralum.

The experiments directed to the determination of specific organisms in drinking waters, in sewage effluents, and floor dust, may be considered together. As common to them all was the question, did they contain the enteric fever bacillus?

In conducting these experiments two difficulties constantly presented themselves, one was the difficulty of being able to separate the specific micro-organisms from the crowd of non-specific bacteria usually present in the impure media examined. The other difficulty was to assure one's self that the specific organism when isolated, was actually the bacillus of enteric fever and not one of the pseudo-enteric bacteria, which so closely resemble it, notably, the *Bacillus coli communis*.

As the outcome of a long series of experimental observations, coupled with a consideration of the causes of failure by other methods, the first difficulty has been practically overcome by the employment of the two methods separately advocated by MM. Chantemesse and Widal on the one part and M. A. Rodet on the other.

The procedure adopted is as follows:—To a series of six tubes, each containing 10 c.c. of beef peptone, five drops of a five per cent. solution of carbolic acid are added. To one of these phenolized tubes are added five drops of the water or suspected solution, to another seven drops, to a third nine drops, and so on up to 15 in the sixth tube. The whole are then placed in an incubator and kept for 24 hours at 45° C. In the cases in which no enteric bacillus is present the bouillon remains sterile.

If, on the contrary, it becomes cloudy, as evidenced by bacterial growth, one proceeds to inoculate from its contents by means of an öse six other similarly phenolized tubes of broth and then keeping them for 24 hours at 45° C.

As a rule, if such be present, one obtains a pure growth of the enteric bacillus or one of its congeners at the second or third seeding or passage.

Having so obtained it, confirmative evidence as to its nature and species is sought by subsidiary observations upon its behaviour when grown in ordinary bouillon, agar, gelatine, potatoes, &c.

The method can be further modified by making a series of plate cultures in phenolized agar, in place of using phenolized broth.

Owing to the great resisting powers of some bacteria, notably *Bacillus coli communis* and *B. mesentericus vulgatus* to carbolic acid, and to even so high a temperature as 45° C., it is necessary in the case of very impure materials, such as sewage effluents and bad waters, to operate even to a fifth or sixth culture through phenolized broth in order to secure a pure growth.

As regards the second difficulty, or that of forming an accurate opinion that the bacillus thus isolated is identical with the enteric fever micro-organism, no hard and fast rules can be at present laid down to distinguish it absolutely from the *B. coli communis*, as many control experiments indicate, that after passing through phenolized broth, both these micro-organisms tend to lose many of their classic properties, notably, motility along with a tendency to become shorter than usual and in many ways to more closely resemble each other.

Moreover, notwithstanding many statements to the contrary, they do not revert to their normal types unless cultivated for some generations in ordinary media. The differential diagnosis of the enteric fever bacillus from *B. coli communis* is yet *sub judice*, and, so far as observations made in the Hygenic Laboratory at the Army Medical School go, all tests employed are inconclusive.

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Notwithstanding this, however, the hygienic interpretation of the presence in a drinking water or other medium of a bacillus, isolated in the above mentioned manner, and which in size, shape, and general behaviour in metrical media indicates it to be either *B. coli communis* or the bacillus of enteric fever, or a pseudo-enteric bacterium, is in no sense weakened.

Apart from difficulties in the way of a differential diagnosis, the mere presence alone of what may be called a pseudo-enteric bacillus suffices to hygienically condemn the medium in which it is found.

From no water has any enteric fever or pseudo-enteric bacillus been isolated during the past year in the laboratory at Netley; but many such were found in a sample of sewage effluent from a sewage farm connected with the Royal Hibernian School, Dublin. The examination of the dust from rooms in the Island Bridge Barracks, Dublin, was in the main negative so far as relates to pathogenic organisms.

As before stated, the observations made at Netley in the Hygienic Laboratory, regarding the differential diagnosis of *Bacillus coli communis* and the enteric fever bacillus are inconclusive, and as such are too incomplete for details to be given now; they, however, in conjunction with experiments on the vitality and viability of enteric fever, and closely allied bacteria, when placed in drinking water, are still being continued. In the latter series the results so far indicate the ability of enteric fever bacilli to survive in ordinary tap water more than a month.

Some experiments made with chloralum, both in the form of a liquid and a powder, have indicated it to possess distinct antiseptic properties. These seem to be much more intense in the liquid than in the powdered chloralum.

The general conclusion reached being that, to secure an efficient destruction and inhibition of specific pathogenic organisms by means of chloralum, a not weaker solution than 1 per cent. must be used.

The following is a list of the samples of water, foods, wines, &c., sent to Netley for special analyses, and were reported on to the War Office during the year :—

	No. of Samples.
Water	64
Wine, Port	5
Beer	2
Brandy	1
Bread	2
Flour	9
Milk	1
Meat Extracts—	
Henderson's Essence of Beef	3
Mosqueras Beef Jelly	1
Dripping	2
Soup	2
Yeast	1
Meat biscuits	1
Butter	2
Pugging	1
Disinfectants—	
Microbene	1
Chloralum	2
Sewage effluents	5
Sewer air	4
Filters (Doulton's)	2
„ (Berkefeld)	1
Total	112

A table of analyses of samples of water sent to the laboratory at Netley is appended. The plan followed is the same as in former years.

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In all 64 samples were examined. These are classified as follows:—

"Fit for use" - - - - - -	28
"Usable, but require filtration" - - -	11
"Unfit on account of organic impurity and of excessive hardness and chlorides" - - - -	25
Total - - -	64

The following table gives the means of these analyses in parts per 100,000:—

Table of Drinking-Waters according to Purity.

No.	Class of Waters.	Chlorine.	Oxygen required for Organic Matter.	Ammonia.		Nitric Acid.	Hardness.	
				Free.	Albuminoid.		Total.	Fixed.
28	"Fit for use" - - -	5·3000	0·0781	0·0032	0·0077	1·1084	14·4107	6·9236
11	"Usable, but requires filtration."	3·0727	0·1220	0·0049	0·0127	0·8915	10·4545	5·5454
25	"Unfit on account of organic impurity and of excessive hardness and chlorides."	11·8000	0·1210	0·0106	0·0168	1·0687	21·7600	12·1600

In the first group, "Fit for use," the chlorine and hardness are high, the cause being the large amount of salts present in the Colchester and Worcester waters.

In the second group, "Usable, but requiring filtration," the chlorine is within the limits usually present in this class of waters, but the albuminoid ammonia is slightly in excess. It is due in many cases to vegetable matter.

AVERAGE RESULTS of Analysis of Five Samples of Port Wine supplied for Hospital use.

Specific Gravity of Wine.	Specific Gravity of Distillate.	Specific Gravity of Extract.	Alcohol per Cent. Vol. in Vol.	Alcohol per Cent. under Proof.	Acidity in Grains per Ounce.			Sugar, Grape and Fruit, in Grains per Ounce.	Total Solid Residue per Cent.	Ash per Cent.
					Total as Tartaric Acid.	Fixed as Tartaric Acid.	Volatile as Acetic Acid.			
02·5442	975·0552	1027·9670	21·0620	63·0636	2·1058	1·3694	0·1890	22·0433	7·1580	0·2260

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
1	Harwich. — Well in Circular Redoubt, 42 feet 6 inches deep.	Clear, colourless; small sediment; good lustre; taste palatable; no smell.	Mineral grit and a little mycelium of fungi.	26·0000	0·0520	0·0024	0·0036	0·2363	67·5	45·0	Excess of chlorine and hardness; probably contaminated by sea water; unfit for drinking.
2	New Forest. — Well about 20 feet deep at Decoy Pond Farm.	Colourless; not turbid; sediment small; lustre good; taste flat; no smell.	Dyed wool; deal and cotton fibre, grass, &c.	4·1000	0·0400	None	0·0051	0·0381	9·0	6·0	Well should be cleaned out before water is used for drinking purposes.
3	New Forest. — Spring at Beaulieu Road Station.	Colourless; not turbid; small sediment; good lustre; palatable taste; no smell.	A little mineral grit.	1·8000	0·0360	None	0·0051	0·2343	3·5	3·0	Fit for drinking purposes.
4	Hythe School of Musketry.—Supply tank.	Clear, colourless; small sediment; good lustre; taste palatable; no smell.	Amorphous matter, vegetable débris; cotton and linen fibre, dyed wool (blue); deal fibre; epidermis of grass-fungi spores.	3·5000	0·0520	0·0052	0·0104	2·4960	30·0	7·5	Unfit for drinking; the free and albuminoid ammonia are in excess.
5	Hythe School of Musketry.— Taken from town water main supply.	Clear, colourless; small sediment; good lustre; palatable taste; no smell.	A little mineral grit, some ferruginous particles and crystals of carbonate of lime.	3·8000	0·0400	None	0·0025	0·1553	27·5	8·5	Fit for drinking purposes.

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
6	Harwich. — Well in circular redoubt, 42 feet, 6 inches deep.	Clear, colourless; small sediment; good lustre; taste palatable; no smell.	Mineral grit, and ferruginous matter.	17·5000	0·1720	0·0073	0·0100	0·3468	55·0	32·5	Unfit for drinking.
7	Colchester.—Taken from stand-pipe, Ordnance Yard.	Clear, colourless; very small sediment good lustre; palatable taste; no smell.	Mineral grit, and a few crystals of carbonate of lime.	29·0000	0·0840	None	0·0081	1·8070	15·0	2·0	Fit for drinking purposes.
8	Woking. — Main Water Works Co. supply.	Clear, colourless; very small sediment; good lustre; palatable taste; no smell.	A little mineral grit.	1·4000	0·0440	0·0073	0·0051	1·7141	18·0	6·5	Fit for drinking purposes.
9	Woking. — Main well, male prison, depth 150 feet.	Clear, colourless; very large sediment; good lustre; taste good; peculiar smell.	Vegetable débris; cotton and linen fibre; dyed wool; grass and minute infusoria.	2·3000	0·0800	0·0180	0·0064	2·7899	14·0	10·0	Unfit for drinking.
10	Woking. — Small well by latrines, male prison, depth 30 feet.	Clear, colourless; large sediment; good lustre; palatable taste; no smell.	Mineral grit; vegetable débris; cotton and woollen fibre; epidermis of grass; minute amœbæ.	1·4000	0·0800	0·0026	0·0064	1·9562	6·0	5·5	Unfit for drinking on account of position and depth.

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
11	Woking.—Well in pump-house outside female prison, depth 75 feet.	Clear, colourless; small sediment; good lustre; palatable taste; no smell.	Mineral grit; vegetable débris; dyed wool (blue); cotton and linen fibre; grass; minute infusoria.	3·1000	0·1040	0·0104	0·0110	2·1794	18·0	17·0	Unfit for drinking.
12	Woking.—Underground 100,000 gallon rain-water tank, male prison.	Clear, colourless; very small sediment; good lustre; taste palatable; smell none.	Mineral grit -	0·5000	0·1400	0·0026	0·0073	0·1976	4·5	4·5	Fit for drinking purposes.
13	Hythe. — Well (Norton's tube) depth 15 feet. Camping ground near the ranges.	Yellow; not turbid; large sediment; lustre dull; slightly brackish; no smell.	Mineral grit; dyed woollen fibre (red); cotton and linen fibre.	66·0000	0·1200	0·0520	0·0176	0·0656	60·0	40·0	Unfit for drinking purposes.
14	New Forest.—Norton's tube. Well 9 feet 10 inches deep; sunk at Beaulieu Road station.	Rather turbid; no smell; fair lustre and taste.	Mineral grit; vegetable fibre; sand.	1·5000	0·0230	0·0056	0·0192	0·3468	4·0	2·0	Usable after filtration.
15	Netley.—Laundry well, Royal Victoria Hospital, after standing all night.	Clear, colourless; small sediment; good lustre; taste palatable; no smell.	Mineral grit and amorphous matter, mycelium of fungi.	2·0000	0·0600	0·0061	0·0086	0·2184	11·5	5·5	Fit for drinking purposes.

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
16	Netley.—Laundry well, Royal Victoria Hospital. Taken at moment of filling to top of bore-pipe. Depth 397 feet.	Colourless; slightly turbid; large sediment; good lustre; taste palatable; no smell.	Mineral grit and suspended matter, chiefly ferruginous; mycelium of fungi in large quantities.	2·0000	0·0320	0·0264	0·0057	0·0875	11·5	8·0	Fit for drinking purposes if freed from suspended matter.
17	Netley.—Laundry well, Royal Victoria Hospital. Taken from bore-pipe of laundry well. Depth 397 feet.	Colourless; very turbid; very large sediment; good lustre; taste palatable; no smell.	Ferruginous matter; mycelium of fungi.	2·0000	0·0480	0·0085	0·0060	0·0802	11·5	5·5	Fit for drinking if freed from suspended matter.
18	Warrington.—Tap in guard yard.	Clear and colourless; small sediment; good lustre; taste palatable; no smell.	Mineral grit	2·0000	0·0320	0·0077	None	1·6787	19·0	8·5	Fit for drinking.
19	Chester. — From drinking tap of tank, near men's cook-house "A" block, Chester Castle.	Slightly yellow; not turbid; small sediment; good lustre; taste palatable; no smell.	Mineral grit; vegetable débris, and amorphous matter.	2·5000	0·0800	0·0120	0·0084	0·1750	13·5	8·0	Recommended that tank be cleaned out. Unfit for drinking purposes.
20	Seaforth Barracks. —Tap in Royal Artillery men's block.	Slightly yellow; not turbid; large sediment; good lustre; taste palatable; no smell.	Vegetable débris; epidermis of grass; minute infusoria.	2·5000	0·1520	None	0·0078	0·3643	13·5	9·5	Fit for drinking purposes.

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
21	Worcester. — Reserve tank, Norton Barracks.	Slightly yellow, clear moderate sediment; good lustre; taste palatable.	Mineral grit; amorphous matter; vegetable débris and minute infusoria.	6·4000	0·1800	None	0·0114	0·5981	12·0	6·5	Unfit for drinking; sulphuretted hydrogen present.
22	Newcastle - on - Tyne.—Tap at Royal Artillery Barracks.	Yellow; clear; moderate sediment; good lustre; taste palatable.	Amorphous matter; vegetable débris, and a few minute infusoria.	1·3000	0·3400	None	0·0195	0·1772	12·5	6·5	Recommended to be filtered before using.
23	Worcester. — Reserve tank, Norton Barracks.	Slight yellow colour; clear; small sediment; good lustre; taste palatable; no smell.	Vegetable débris; cotton fibres; mineral grit and amorphous matter.	7·5000	0·1280	None	0·0142	0·5317	14·0	8·5	Unfit for drinking.
24	York. — Strensal Camp, subsoil collection. Tank in A lines.	Yellow colour; clear; moderate sediment; good lustre; taste palatable; no smell.	Vegetable débris; spores; mycelium of fungi.	1·9000	0·3600	0·0088	0·0170	0·1284	19·5	7·0	Recommended that tank be seen to; unfit for drinking.
25	York. — Strensal Camp, subsoil collection. From tank in "A" lines, and passed through a small filter.	Clear, colourless; very small sediment; good lustre; taste palatable; no smell.	Some particles of carbon; vegetable spores; one or two water fleas.	1·8000	0·1120	0·0263	0·0262	0·0208	14·0	6·0	Unfit for drinking.

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
26	Newcastle-on-Tyne.—Tap in a private dwelling, opposite Newcastle Barracks gate.	Yellow colour; clear; slight sediment; good lustre; taste palatable; no smell.	A little mineral grit.	1·3000	0·1800	None	0·0126	0·1663	14·5	6·5	Usable; careful filtration recommended.
27	Sunderland.—Tap outside barracks.	Clear, colourless; good lustre; taste palatable; no smell; small sediment.	Linen fibre; cotton; some silk and a few hairs; mineral grit; epithelium, and much amorphous matter.	2·6000	0·0480	None	0·0064	0·5186	28·0	10·5	Fit for use; filtration recommended. Well should be protected from surface impurities.
28	Colchester Camp.—Cook-house pump "B" lines, depth 50′ 9″.	Clear, colourless; small sediment; good lustre; taste palatable; no smell.	A few cotton fibres; some vegetable debris and numerous infusoria.	5·0000	0·0400	None	0·0078	4·9891	15·0	12·5	Fit for drinking.
29	Fort George Inverness.—No. 1, well, 20 feet deep.	Greenish yellow; clear; small sediment; good lustre; taste palatable; no smell.	A few epithelium scales; vegetable debris and mineral grit.	6·7000	0·0900	0·0110	0·0103	2·6714	10·5	10·0	Not fit for drinking purposes.
30	Fort George, Inverness. — Well at O.S. offices, depth 17 feet.	Clear and colourless; small sediment; good lustre; taste palatable; no smell.	Vegetable débris; hairs; cotton and linen fibre; a few infusorial forms; also a considerable amount of starch granules.	6·3000	0·0400	0·0025	0·0073	4·9800	16·5	12·5	Recommended to be filtered before use. Well should be protected from surface pollution.

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
31	Fort George Inverness. — Well at Commanding Officer's quarters, depth 16 feet.	Clear, colourless; small sediment; good lustre; taste palatable; smell none.	A few epithelial scales, some cotton; vegetable débris, and some starch granules.	4·3000	0·0600	None	0·0084	3·9825	11·0	9·5	Fit for drinking. A shallow well, if possible another source should be provided.
32	Worcester. — Norton Barracks, underground tank.	Yellow; not turbid; small sediment; lustre fair; taste palatable; no smell.	Vegetable débris and mineral grit.	4·7000	0·1520	0·0032	0·0116	0·3092	10·0	7·5	Usable. Tank should be cleaned out.
33	Worcester. — Norton Barracks, water company's main.	Yellow; not turbid; large sediment; fair lustre; taste palatable; no smell.	Vegetable débris and mineral grit.	5·0000	0·1440	None	0·0102	0·3501	8·5	6·5	Fit for drinking purposes.
34	Worcester. — Norton Barracks, cistern on roof, lower block, married soldiers' quarters.	Yellow; not turbid; large sediment; fair lustre; taste palatable; no smell.	Mineral grit; linen fibre; hairs; vegetable débris.	4·8000	0·1760	None	0·0110	0·3223	—	—	Usable. Tank should be cleaned out.
35	Sunderland.—From tap most used for drinking purposes in barracks.	Clear, colourless; small sediment; good lustre; taste palatable; no smell.	Mineral grit and vegetable débris.	2·6000	0·0400	None	0·0024	0·5324	29·0	12·51	Fit for drinking purposes.

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
36	Kneller Hall. — Stream opposite Whitton Farm at head of lake.	Greenish yellow; clear; large sediment; lustre dull; no peculiar taste or smell.	——	4·7000	0·1440	0·0300	0·0356	0·6765	17·5	8·0	Unfit for drinking purposes.
37	Browndown Camp. —No. 1 well, 8 feet deep.	Yellow; turbid; large sediment; no lustre; taste flat; no smell.	Vegetable matter; mineral grit; and a few infusoria.	5·9000	0·1800	0·0120	0·0416	None	8·0	7·0	Unfit for drinking.
38	Browndown Camp. —No. 2 well, 8 feet deep.	Same as No. 37 -	Same as No. 37 -	5·7000	0·2960	0·0064	0·0624	1·8067	8·0	7·0	Unfit for drinking.
39	Newcastle-on-Tyne. —Tap in barracks, immediately after water was turned on at 6 a.m.	Yellow; not turbid; small sediment; fair lustre; taste palatable; no smell.	Vegetable matter and mineral grit.	1·2000	0·1880	0·0027	0·0114	0·1791	16·5	6·0	Fit for drinking.
40	Newcastle-on-Tyne. —From main of water company.	Same as No. 39 -	Mineral grit and a few fibres of cotton.	1·2000	0·2280	0·0044	0·0118	0·2268	16·5	7·0	Fit for drinking purposes.
41	Newcastle-on-Tyne. —Tap in the barracks.	Same as No. 39 -	Mineral grit - -	1·2000	0·2000	0·0028	0·0117	0·1811	16·5	7·5	Fit for drinking purposes.
42	Newhaven. — Tap near officers' quarters in fort.	Greyish; clear; small sediment; lustre dull; taste brackish; smell peculiar.	Vegetable débris; mineral grit.	66·0000	0·0720	None	0·0104	1·3676	47·5	15·0	Unfit for drinking.

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
43	Fort George, Inverness.—No. 2, well, N.E. corner of fort, 20 feet deep.	Yellow; not turbid; small sediment; fair lustre; taste palatable; no smell.	Vegetable débris; mineral grit.	4·6000	0·1600	0·0057	0·0146	1·2046	10·5	7·5	Usable after careful filtration. The well may require cleaning out.
44	Fort George, Inverness.—Taken from a well 20 feet deep.	Same as No. 43 -	Same as No. 43 -	6·5000	0·2240	0·0112	0·0142	1·0094	12·5	5·0	Unfit for drinking.
45	Landguard Fort.—Spring at Walton, Suffolk.	Yellow; slightly turbid; large sediment; fair lustre; taste palatable; no smell.	Vegetable débris; mineral grit and a few infusoria.	9·3000	0·0364	0·0012	0·0100	0·0948	17·0	11·5	Fit for drinking purposes.
46	Lydd. — "Ripe pump," depth of well 13 feet.	Yellow; clear; very small sediment; good lustre; palatable taste; no smell.	Mineral grit and linen fibre.	3·9000	0·1575	0·0028	0·0217	1·7622	9·0	6·0	Should be carefully filtered before being used for drinking purposes. The well should be protected from surface pollution.
47	Newhaven. — Tap outside fort where the old and new pipes connect.	Clear, colourless; sediment moderate; lustre good; taste palatable; no smell.	Sand and vegetable débris.	45·0000	0·0078	None	0·0077	1·9548	35·0	14·0	Unfit for drinking.
48	Weedon. — From stream before filtration.	Yellow; turbid; very large sediment; lustre fair; taste palatable; no smell.	Vegetable débris; leaves; wood; and sand.	1·6000	6·0878	0·0288	0·0163	0·5153	25·0	8·5	Unfit for drinking purposes.

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
49	Birmingham. — From W.D. services in connection with main town supply.	Greenish; not turbid; very large sediment; fair lustre; taste palatable; no smell.	Vegetable débris; mineral grit.	1·6000	0·1024	0·0028	0·0160	1·4030	16·5	7·5	Fit for drinking purposes after careful filtration.
50	Guernsey. — Fort George, north valley, well 22 feet deep.	Clear, colourless; sediment very small; lustre good; taste palatable; no smell.	Mineral grit; vegetable débris.	5·9000	0·0218	None	0·0040	2·1882	12·0	8·0	Fit for drinking purposes.
51	Guernsey.—North Barrier, Fort George, well 80 feet deep.	Same as No. 50 -	Same as No. 50 -	5·2000	0·0131	0·0045	0·0040	1·4770	10·0	6·5	Same as No. 50.
52	Guernsey. — Citadel, Fort George, well 105 feet deep.	Same as No. 50 -	Same as No. 50 -	10·2000	0·0218	None	0·0090	6·5646	18·5	12·0	Same as No. 50
53	Guernsey. — Cricket Field, Fort George, well 78 feet deep.	Clear, colourless; large sediment; good lustre; taste palatable; no smell.	Vegetable débris and mineral grit.	4·3000	0·0116	None	0·0090	1·9393	7·5	4·5	Same as No. 50.
54	Newhaven. —Well on Glacis.	Yellow; clear; very large sediment; lustre fair; taste palatable; no smell.	Mineral grit; amorphous matter; vegetable débris.	11·6000	0·0650	0·0061	0·0101	2·3410	19·0	10·5	Fit for drinking purposes.

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
55	Weedon. — From stream before filtration.	Slight yellow; turbid; large sediment; fair lustre; taste palatable; no smell.	Vegetable débris; remains of plants; some infusoria; and mineral grit.	1·4000	0·0339	0·0101	0·0107	0·3906	25·0	6·5	Usable if carefully filtered.
56	Dublin. — Royal Hibernian Military School.	Slight yellow; clear; small sediment; dull lustre; no peculiar smell.	Mineral matter and vegetable débris; many forms of gammarus.	2·2000	0·0680	0·0124	0·0345	0·9165	26·0	8·5	Unfit for drinking.
57	Hurst Castle.—No. 2 underground brick tank.	Yellow; clear; very slight sediment; fair lustre; tast palatable; no smell.	Mineral grit - -	3·4000	0·1642	0·0082	0·0099	0·2159	6·5	6·5	Fit for drinking.
58	Hurst Castle.—No. 10 underground tank.	Same as No. 57 -	Vegetable débris and mineral grit.	2·7000	0·1059	0·0033	0·0072	0·2724	5·0	4·0	Fit for drinking purposes.
59	Hurst Castle.—No. 11 underground tank.	Same as No. 57 -	Mineral grit - -	2·2000	0·0688	None	0·0050	0·1459	4·0	4·0	Fit for drinking purposes.
60	Hurst Caste.—No. 5 iron tank above ground.	Yellow; clear; large sediment; fair lustre; palatable taste; no smell.	Mineral matter and vegetable débris.	2 2000	0·0688	0·0031	0·0055	0·1218	4·5	4·5	Fit for drinking purposes.

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No. of Sample.	Source.	Physical Characters.	Microscopic Characters of the Sediment.	Quantitative Analyses in parts per 100,000.							Remarks.
				Chlorine.	Oxygen required for Oxidisable Matter.	Free Ammonia.	Albuminoid Ammonia.	Nitric Acid.	Hardness.		
									Total.	Fixed.	
61	Dublin. — Tap in W.C., lower dormitory, old building, Royal Hibernian Military School.	Yellow; clear; very small; no lustre; taste flat; no smell.	Mineral grit - -	1·2000	0·1115	None	0·0175	0·3935	5·5	5·5	Unfit for drinking.
62	Dublin. — Tap in W.C., upper dormitory, Royal Hibernian Military School.	Same as No. 61 -	Vegetable débris -	1·2000	0·1199	0·9078	0·0140	0·3651	5·0	5·0	Unfit for drinking.
63	Shoeburyness. — New artesian well, depth 434 feet.	Clear, colourless; large sediment; lustre good; taste palatable; no smell.	Cotton and linen fibres; wool (undyed and dyed blue); mycelium of fungi; vegetable débris; minute infusoria; epidermis of grass.	20·4000	0·0106	0·0114	0·0085	0·0981	19·0	2·0	Fit for drinking if surface pollution guarded against.
64	Shoeburyness. — Old well, 48 feet deep.	Colourless; turbid very large; lustre good; taste palatable; no smell.	Vegetable débris; oscillatorian filaments; mycelium of fungi.	7·6000	0·0212	0·0228	0·0104	0·3570	30·0	8·5	Usable if carefully filtered. If possible another source of supply should be provided.

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APPENDIX No. II.

LIST OF OPERATIONS PERFORMED AT THE ROYAL VICTORIA HOSPITAL, NETLEY, DURING THE YEAR 1892, WITH SHORT ABSTRACTS OF THE MOST IMPORTANT CASES.

By Brigade Surgeon-Lieut.-Colonel W. F. Stevenson, Army Medical Staff, Professor of Military Surgery.

Operations.	Number of Cases.	Diseases.	Results.				Remarks.
			Completely successful.	Partially successful.	Failed.	Died.	
Amputation of thigh, lower third.	1	Scrofula (knee)	1	—	—	—	
Excision of knee	2	Do.	—	—	1	—	One still in hospital.
Extraction of foreign bodies.	1	Gun-shot (knee)	1	—	—	—	Small shot.
Sinuses laid open	8	Fistula in ano	8	—	—	—	Sphincter previously dilated.
Ligature	8	Piles, internal	8	—	—	—	Do. do.
Circumcision	5	Phimosis	5	—	—	—	
Forcible flexion under an anæsthetic.	6	Ankylosis of joint	2	3	1	—	Three of knee, one of shoulder, and two of elbow.
Radical cure	1	Hernia, oblique inguinal.	1	—	—	—	
Sequestrum removed	2	Necrosis of femur	2	—	—	—	
Do. do.	2	Necrosis of tibia	2	—	—	—	
Do. do.	1	Necrosis of metatarsal bone.	1	—	—	—	
Incision and drainage	2	Abscess of liver	1	—	—	1	The abscess treated in the fatal case healed perfectly, but others formed and could not be reached.
Fragments wired	1	Fracture of patella.	1	—	—	—	
Drainage through perineum.	1	Abscess of prostate.	1	—	—	—	
Excision of testicle	1	Abscess of testicle	1	—	—	—	
External urethrotomy	1	Stricture of urethra.	—	—	—	1	
Duct opened into mouth.	1	Salivary fistula	1	—	—	—	
Suture of tendon	1	Wound of tendon	1	—	—	—	Deep flexor of finger.
Excision of glands	23	Suppuration of lymphatic glands, groin, and neck	23	—	—	—	

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Operations.	Number of Cases.	Diseases.	Results.				Remarks.
			Completely successful.	Partially successful.	Failed.	Died.	
Iridectomy - -	4	Syphilis, secondary	3	—	1	—	Iritis and synechia.
Do. - -	1	Recurrent iritis -	1	—	—	—	
Do. - -	3	Opacity of cornea	3	—	—	—	
Excision of tumour -	1	Lipoma of conjunctiva.	1	—	—	—	
Paracentesis of anterior chamber.	3	Ulcer of cornea -	—	2	1	—	
Do. do. -	1	Hypopyon -	—	1	—	—	
Excision of eye-ball --	2	Staphyloma -	2	—	—	—	
Do. do. -	1	Foreign body in eye.	1	—	—	—	
Extraction of lens -	2	Cataract, hard -	2	—	—	—	
Needling capsule of lens.	1	Cataract, soft -	1	—	—	—	
Total - -	—	Total -	74	6	4	2	

Short Abstracts of some of the Cases.

Cystic tumour in popliteal space.

Lieut. F. B—— was admitted on 27th October for the purpose of having a tumour removed from behind the left knee joint, which considerably interfered with his power of walking. The operation was performed on 29th October. An incision about 3 inches long was made over the tumour, which was then found to be partly lying on the inner head of the gastrocnemius, and passing backwards behind it. The tumour was dissected out, and found to be of cystic formation, about the size of a walnut. The hæmorrhage was very slight, and when it had quite ceased the incision was closed by means of a continuous horse-hair suture; no drain was used; iodoform was dusted over the wound, and an alembroth wool dressing applied; a back splint was put on the leg from the upper part of thigh to the ankle. The wound ran a perfectly aseptic course, and had quite healed in a fortnight. The joint is now as strong and as useful as it was before the growth of the tumour.

Scrofula of knee.

Private J. N——, aged 22, was invalided from India for scrofulous disease of the right knee joint, and arrived at Netley on 2nd November 1891. His family history was not one of tuberculosis, but his own was distinctly so. He had been in hospital in Belgaum for tubercle of the lung, and for necrosis of sternum, and of the first phalanx of the second finger. On admission here he was a good deal emaciated; there were two sinuses leading down to dead bone over the sternum, from which the discharge was free; the second finger of the right hand had been amputated; and the right knee joint was much enlarged and painful on motion. The knee felt doughy and fluctuant, and had considerable lateral motion; the patient complained of startings in the limb at night. The evening temperature was usually about 100° F. The knee was treated with absolute rest by means of plaster and "water glass" apparatus and splints; but no improvement took place. In March 1892 erasion of the joint was performed, a large quantity of broken down gelatinous tissue, synovial membrane, cartilage and bone, being cut and scraped away, and the limb put up in a fixed apparatus. Considerable improvement as regards the pain in the

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joint followed the operation, but no ankylosis occurred and the disease progressed. In June 1892 a sinus remained open on the outer side of the joint, which was much enlarged and very painful. The patient was emaciated, but not to any extreme degree; he had cough and night sweats, and tubercle bacilli were to be found in large numbers in his sputum; there were still sinuses leading to dead bone over the sternum and one rib. As the patient's condition was steadily deteriorating from want of rest, pain, and free discharge of offensive pus from the knee joint, the limb was amputated through the lower third of the femur on 15th June. The skin surface was well washed and packed with lint wet with 1–40 carbolic lotion over night, the amputation being done by means of antero-posterior skin flaps and circular division of the muscles. In cutting the anterior flap a good deal of pus was given exit to, and accordingly the sharp spoon and irrigation were very freely used on all apparently diseased tissue. A drain was put in the stump, and an iodoform gauze and alembroth wool dressing applied with a Gooch splint. On examination the joint was found completely disorganised; no cartilage remained, and the ends of the femur and tibia were carious to a large extent. The wound was dressed and the tube removed on the 18th June (3rd day). On 10th day the wound was quite healed, except at the inner corner, where there was a little suppuration. This portion of the wound was treated with iodoform emulsion, and had healed on 5th July. The patient's condition, as regards pain and distress, was greatly relieved by the removal of the diseased limb, and he continued in comparative comfort until November, when the tuberculous condition of the lungs suddenly became active, and he died towards the middle of December of phthisis.

Scrofula of knee.

Private E. B——, aged 24, was invalided from India for chronic synovitis of the right knee joint, and arrived at Netley on 11th January 1892. His medical history sheet showed that he had had three admissions for synovitis of the same joint, the first attack following one of enteric fever in 1888, and the last occurring at Cawnpore in April 1891. He was sent to Chakrata in May 1891, and invalided from there in October. On arrival at Netley he was pale and ill, but fairly well nourished; the right knee was much swollen (2 inches more than the left in circumference); the skin over it pale and shining; the joint was painful on the least motion, but not to the touch; the joint felt semi-elastic and pulpy on palpation, and admitted of lateral movement. Temperature normal. The case was treated with fixed apparatus and extension until June, but no improvement took place; on the contrary, at that time the temperature was nearly always above the normal, pain in the joint was constant, startings were felt in the limb at night, and the man's general health was not so good as it had been on admission. No abscesses had opened about the joint. On 8th June the joint was excised by means of a semilunar incision, extending between the two condyles of the femur and reaching as far down as the tubercle of the tibia; this incision laid open a small abscess over the inner tuberosity of the tibia, which was not connected with the joint or with diseased bone. The joint was found filled with a gelatinous mass of tubercular tissue, which, together with the patella, was removed by means of scissors and sharp spoon; all the recesses of the joint were well scraped out and irrigated with perchloride solution, and the articular surfaces of the bones sawn off; no vessel required ligaturing. The cut surfaces of the bones were united by silver wire, and the skin incision by a continuous horsehair suture; a drainage tube was put across the joint at the extremities of the incision. The wound was dressed with iodoform gauze and alembroth wool, and the limb put up with thin iron back and side splints encased in plaster of paris, which was interrupted at the wound. Examination of the portions removed showed that the cartilages had, for the most part, disappeared, being replaced by granulation tissue, and that there was a considerable amount of carious disease of both bones. On the next day the dressings had to be changed, a quantity of blood-stained serum having come through. Temperature 103° F. on the evening of the operation, and gradually decreased to 98·6 on 15th June. The dressings were changed on 12th and 18th June; wound looking healthy, no pus; on the former date the drainage tube was changed for much smaller one, about 1 inch long. On 24th all stitches were removed, and the wound had healed, except where the tube rested at the inner side of the joint, whence a little discharge came. By December the man's general

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health had greatly improved; he had considerably increased in weight: his complexion was ruddy; he had no pain, but bony ankylosis had not taken place in the excised joint; fibrous union had occurred, but there was motion in the joint in all directions to a slight extent. The limb was in a plaster apparatus, and the man had been getting about on crutches for some months. Under these circumstances it was determined to make another attempt to obtain firm union and a useful leg. On 14th December a second excision was performed under ether; the leg was elevated during the administration of the anæsthetic, and an Esmarch bandage applied over the upper part of the thigh. A horse-shoe shaped incision was made at about the site of the previous one, the fibrous union broken down, and sections of about ½ inch thickness of the tibia and femur made; all unhealthy-looking sinus tissue was scraped away, and when the ends of the bones were properly adjusted, two long ivory pegs, which had been previously boiled in water for an hour, and then placed in 1-20 carbolic lotion, were inserted through the bones, one being passed from the inner side of the head of the tibia through the outer condyle of the femur, and the other from the outer to the inner side. Some bleeding points were ligatured, and the leg adjusted on a strong iron splint with a foot piece, by means of a plaster apparatus; iodoform gauze and alembroth wool dressing was applied. Considerable oozing took place during the day, and the dressing had to be changed twice during the first 12 hours; at the second dressing pressure was applied over the wound by means of an elastic bandage, and this then ceased. On 17th December the wound was dressed, and some blood escaped at the inner side; a small drainage tube was inserted. On 3rd January 1893 a rise of temperature to 102° F. occurred; this was found to be due to suppuration and some tension on the inner side, and the temperature came down to normal on exit being given to a little pus. All the sutures had been removed by 7th January, and the wound was soundly healed, except at two spots, one at each end, from which a slight amount of discharge continued to come; the temperature was about normal, but occasionally rising to 99·0° F. Ten weeks after the date of the operation the patient was quite free of pain, and seemed in excellent health. A superficial sinus remained on the inner side, but no dead bone could be felt. The splint and plaster apparatus had been removed a few days previously in order to put on new pads and, as far as one could judge from a partial examination into this point, firm consolidation of the bones appeared to be taking place. The patient remains under treatment.

Operation for radical cure of hernia.

Private F. B——, aged 21, was invalided from the West Indies for inguinal hernia, and admitted at Netley on 14th May 1892. He was a healthy-looking, well-developed young man, suffering from varicose veins of both legs and an oblique inguinal hernia on the right side, for which he had worn a truss for some time. On the voyage home, in consequence of some effort made by the patient, the truss slipped and the hernia came down. He was unable to reduce it himself, and did not seek aid. The tumour remained unreduced until a day or two after admission here, but no symptoms in connexion with it occurred. The truss was not used, and the bowels acted regularly. When first seen here the hernia was about the size of a walnut, and some difficulty was experienced in its reduction, but this was satisfactorily attained. Both sides of the question having been put before the patient, he expressed his desire that the operation for radical cure should be undertaken. Accordingly the operation was performed on 16th May by Surgeon Captain Whitehead. The particular operation selected was one used by Mr. Stanley Boyd at Charing Cross Hospital, but which has not as yet, I believe, been published. Surgeon Captain Whitehead had seen Mr. Boyd perform it on several occasions, and the latter gentleman had been good enough to describe it in writing. The parts concerned in the operation were shaved, well washed, and packed with lint wet in sublimate lotion and covered with a waterproof material on the previous evening; this was removed on the operating table when the patient was under chloroform, which was the anæsthetic used. An incision about three inches long was made over the inguinal canal, commencing a little below the external ring, and the sac carefully dissected down upon, all hæmorrhage being controlled by catch forceps as it occurred. The sac was then dissected out until it was free of all attachments from the scrotum to near the internal ring;

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it was then opened at its lower end, and the finger was passed through it into the abdominal cavity to make sure that it was free of intestine and omentum. The sac was then held in strong clamp forceps and twisted six or eight times upon itself and let go, when it untwisted itself one turn. The twisted sac was then pushed up to the internal ring where it remained. The conjoined tendon and Poupart's ligament were then sutured together by means of strong salmon gut, a continuous suture passed three times between the two structures and tied. The lower part of the canal was closed by means of two or three catgut interrupted sutures, the wound well irrigated with sublimate lotion, 1–4000, and the skin brought together by a continuous horsehair suture; iodoform was dusted over the wound and a dressing of iodoform gauze and alembroth wool applied. The operation lasted an hour and a quarter, and towards the end respiration began to fail, but all dangerous symptoms passed away under the use of artificial respiration and ether hypodermically. In the afternoon there was a good deal of pain in the wound, and a quarter grain of morphia was injected. Vomiting set in towards evening, though nothing but a little ice had been given, and continued until the morning of the 1st., when it ceased. After the latter date the recovery was uninterrupted. The wound was redressed for the first time on the tenth day and was then sound and perfectly dry. The horsehair suture was removed on the twelfth day, by which time the wound was quite healed. Later on this man was invalided out of the service on account of varicose veins and palpitation, and at that time there was no impulse in the inguinal canal or coughing. No truss was worn.

Removal of sequestrum from femur.

Sergeant E. L——, aged 24, was invalided from India for necrosis of the femur, and admitted at Netley on 23rd April 1892. The necrosis followed on an attack of periostitis which the man attributed to over exertion at artillery gun drill. He had been some months in hospital in India, and an abscess formed and was opened, a small quantity of pus being given exit to. On admission at Netley the right thigh was much enlarged, due, apparently, to great thickening of the femur; there was a broken down cicatrix over the outer and back part of the middle third of the bone, through which the probe passed in two directions towards the femur for about two inches, but no dead bone could be reached or felt. On measurement the right femur appeared to be longer than the left. Drainage tubes were passed into the sinuses and absorbent wool dressings used to take up the discharge, which was but slight in amount. This treatment was continued for about two months, but no improvement whatever took place; the thickening about the femur steadily increased. In June the swelling commenced about three inches above the knee, extended for about six inches, then gradually decreased and disappeared. Near the great trochanter the skin was not discoloured, but it was hot and tender on pressure, and there was deep-seated pain in the limb, increased on standing. The man had had an admission for secondary syphilis in 1887. On 22nd June, under chloroform, an Esmarch's bandage was applied after elevation of the limb, and an incision about five inches long made through the swelling on the outer side. The tissues cut through were hard and cartilaginous, and of great thickness. At the bottom of the very deep wound, and beneath a layer of new bone, some loose necrosed fragments were found and removed. The cavity in the femur was scraped with a sharp spoon and lightly plugged with iodoform gauze; the wound was filled with similar material, and an alembroth wool dressing applied. For the first two days after the operation the man suffered a good deal of pain, and the temperature ranged from 99·0° F. to 100·0° F. Then the pain ceased, the temperature became normal, and the wound slowly filled up. In September two small pieces of bone came away, and the enlargement of the femur commenced to decrease. Eventually the wound quite healed, the enlargement almost completely disappeared, and the patient went out on two months' furlough. On return he looked in excellent health; the cicatrix was sound; a little enlargement still remained; there was no pain or tenderness and the man had perfect use of the limb. He was discharged to rejoin his regiment for duty.

Fracture of patella wired.

Private M. F——, aged 29, was invalided from India for a fracture of the patella, and arrived at Netley on 23rd March 1892. On admission, the right knee joint was a good deal enlarged, and the fragments of the broken bone

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were over an inch apart. There was good fibrous union, and the man could get about with the aid of a stick, but the limb frequently gave way under him as he walked, and practically he was much crippled by the condition of the joint. On 16th June the fragments of patella were brought together by wire sutures. Chloroform was administered, the leg elevated, and an Esmarch's bandage applied. An incision about 3½ inches long was made over the front of the joint in the long axis of the limb, and the tissues reflected to either side exposing the fragments of the patella, and the fibrous material between them. The latter was removed, and the surfaces of the pieces of bone refreshed. Two silver wire sutures were inserted, the joint well irrigated with sublimate solution, the fragments brought into close apposition, and the wires twisted. An opening was made in the skin on the inner side and a small drainage tube put in as there was a good deal of oozing when the bandage was removed. The skin wound was closed by a continuous horsehair suture and four catgut sutures. Iodoform gauze and alembroth wool dressing was applied, and the limb placed on a back splint with a foot piece. Temperature 99·0° F. on the second day, and subnormal on the third, when the drain was removed, but the deep portion of the dressing was not disturbed. The wound was re-dressed on the tenth day and was found to be dry and healing well. The sutures were removed on the 23rd day, and the wound was then soundly healed. In August a point of one of the wires was found to be causing some pain and irritation of the skin; a small incision was made over it and a piece of the wire removed. In October the man had perfect use of the joint and limb, but it was doubtful if the union was by bone, as it was thought that some lateral movement between the fragments could still be obtained, and there appeared to be a separation of a quarter of an inch.

Abscess of liver. Private R. C——, aged 25 years, was invalided from Burma for dysentery, and arrived at Netley in April 1892. Both in India and Burma he had suffered from ague and from slight attacks of hepatitis. On arrival here he was sallow and emaciated; there was pain over the region of the liver, and the organ was enlarged; there was an evening rise of temperature and night sweating was profuse; there was no jaundice; the stools were clay coloured; there was no diarrhœa. On May 4th there appeared to be a slight fulness over the eighth interspace in the nipple line; pain was most marked at this spot, but there was neither redness nor œdema. An aspirating needle was passed in at the situation indicated above, and six ounces of dark-coloured pus withdrawn; and again on 6th May three ounces more removed. On 12th May it was intended to incise the abscess and drain it, but the aspirator needle, passed in from the same spot and in the same direction, failed to show pus, so nothing further was done on that occasion. On 25th May the abscess was laid open and a drainage tube put in, about four ounces of pus being evacuated; alembroth wool dressing was applied. On the day after the operation the temperature was normal, and the after history of the case was one of uninterrupted recovery. By July he had regained his usual weight and was in excellent health. He was discharged to duty with his regiment on 9th July. This case had a history of dysentery, but it is probable that the liver abscess was not a pyæmic one due to dysentery, but rather a result of the attacks of hepatitis from which the patient suffered in India.

Abscess of liver. Gunner B. K——, aged 28, was invalided from India for hepatitis, and arrived at Netley on 3rd August. On admission he was somewhat emaciated, but did not look very ill. The liver was enlarged in both directions, and was painful and tender on percussion; pain in the right shoulder was complained of. The evening temperature was always above normal, about 100·0° Fahr.; night sweats occurred; there was, occasionally, diarrhœa; the man had had dysentery. The point of greatest pain and was in the eighth interspace and about 3 inches behind the mid-axillary line. All the symptoms pointed towards liver abscess, but the patient would not permit the use of the aspirator for diagnostic purposes. When he had been about six weeks in hospital an abscess was found pointing in the eighth interspace behind, and a needle was inserted and 36 ozs. of pus aspirated off. On 9th September the operation for drainage was performed under ether. An incision about 3 inches long was made over the eighth interspace; it was then found that the eighth and ninth ribs were so closely approximated that the smallest size drainage tube would

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not pass between them, and it was, therefore, necessary to excise a portion of rib. One and a half inches of the ninth rib were accordingly removed by means of bone forceps, the abscess was washed out with sublimate solution, two large tubes put in, and an alembroth wool dressing applied. A good deal of pain was complained of towards evening; T. 101·0° F. at 6 p.m. He had a restless night; but the temperature next morning was normal. For the first 10 days the case progressed perfectly satisfactorily; at each dressing the abscess cavity was washed out with hot iodine water (one drachm of the tincture to eight ozs. of water); the temperature remained normal; the discharge rapidly decreased; one tube was removed altogether and the other was shortened; the patient's appetite improved, and it seemed that he was rapidly tending towards convalescence. But on 19th September the temperature suddenly went up to 102·6° F., and great pain in the shoulder was complained of; the man had passed a restless night; the wound looked healthy, and the discharge was not fœtid. On 20th he was worse; T. 103·8° F., and there were some signs of pneumonia; pulse 116. On 22nd no improvement had taken place, and it was considered probable that another abscess had formed; this was searched for in three directions, and to a considerable depth, but not found. For a few days his condition improved; the temperature came down, he had less pain, and he rested better at night. On 28th September the temperature rose above 100·0° F.; the sputa became rusty, and the signs of consolidation at the right base increased. He had been losing flesh, and emaciation, at this time, was most marked. Pain in the liver and shoulder returned, his appetite began to fail, and he got very little sleep. On 1st October diarrhœa set in and he steadily became weaker. The abscess had nearly healed, the tube having been reduced to about ¾ of an inch and serving merely to keep the skin wound open; the diarrhœa continued, the lung trouble increased, the temperature remained high, emaciation rapidly progressed, and he died early in October. Some days before death it had been found impossible to keep the short tube in the wound; the abscess had healed and the wound was allowed to close. At the post-mortem examination 12 ozs. of serum were found in the right pleural cavity, and the right lung was adherent to the costal pleura and to the diaphragm; the liver was adherent to the diaphragm, and it and the right lung were removed together; the lower lobe of the right lung was in a condition of red hepatisation, the left lobe of the liver was of the nutmeg character; on the upper surface of the right lobe there were three large abscesses, occupying at least three-fifths of the substance of the organ; large shreds of necrosed liver tissue were suspended in the pus, and the walls of the abscesses were ragged and uneven. On the under surface of the right lobe was another abscess of the same character as those on the upper surface, but smaller in size. Nothing remained of the abscess which had been operated on, except puckered cicatricial liver tissue, and some caseous matter at the outer part of what had been the track of the drainage tube. The mucous membrane of the small intestine was congested; the caecum was deeply congested; the walls of the large intestine were much thickened, and the mucous membrane of this part of the gut showed about 30 patches of ulceration about ¼ to ½ an inch in diameter. The other organs were fairly normal in appearance.

External urethrotomy.

Quarter-Master Sergeant J. M——, aged 37, was invalided from Malta for stricture of the urethra, and arrived at Netley on 22nd June. His complaint had existed since March 1882, when he had complete retention, and no instrument could at first be passed. He remained in hospital at that time for a month, and the stricture was eventually dilated up to No. 10. Again, in 1888, he had a sudden attack of retention. He was admitted into hospital, and the stricture was in process of dilatation when an abscess developed in the prostate, which discharged by the urethra and rectum. When the abscess had ceased to discharge and the stricture had again been dilated to No. 10 he returned to duty. Early in 1892 he was again admitted for stricture, and another prostatic abscess formed; as the result of this he was invalided home. On arrival here the stricture admitted a No. 2 catheter, and the abscess had ceased to discharge; he was greatly emaciated, and showed signs of fibroid changes in both lungs. Treatment directed towards dilatation of the stricture was found most difficult to carry out. Attempts at passing instru-

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ments of any sort brought on attacks of urethral fever, notwithstanding careful treatment by complete rest in bed and the administration of opium, during which the temperature ranged between 100·0° F. and 103·0° F., and accompanied by profuse perspiration and clonic spasms of the muscles of the limbs. But these attempts were unavoidable because the man frequently had attacks of retention. The abscess in the prostate re-opened and discharged through the rectum, and to some extent through the urethra. During the first fortnight after his admission to Netley the patient was extremely ill; the history of the case at this time was one of pain, retention of urine, urethral fever, and sleepless nights. On 7th July improvement in his condition was first noted; the pain lessened; he passed water in a small stream; he was free of fever, and the abscess had closed. On 1st August the improvement had been maintained, and his condition warranted operative interference, if necessary. Chloroform was accordingly administered, and, as no instrument could be passed, an external urethrotomy was done by cutting down on a No. 5 sound with a midian groove. The stricture was in the membranous portion, about an inch in length, and of a cartilaginous consistency; this was divided, and a No. 10 catheter passed into the bladder. He recovered from the chloroform in about an hour, but was very weak and exhausted. On 2nd August the catheter was draining satisfactorily, and the man had passed a fair night; had 30 minims of tincture of opium on account of pain in the bladder; pulse very weak and fluttering, 120 per minute; wound looking healthy. "August 3rd, had a great deal of pain in the bladder yesterday; catheter not "removed; has been kept constantly under the influence of opium; T. 101·4° F. "last evening; to-day 99·0° F.; is very weak and exhausted." On August 4th he was very ill; had passed a very restless night; in pain and with a tendency to delirium. Catheter withdrawn, urine smoky; pulse 140, T. 101·4° F. Wandering at times; fed with great difficulty; wound healthy looking; passing a fair amount of urine. He gradually became worse, and died at 6 a.m. on 5th August. No post-mortem examination was obtained in this case.

Wound of great sciatic nerve.

Lance-Corporal F. M——, aged 21, was invalided from India on account of an accidental gun-shot wound of the thigh, and arrived at Netley on 25th April. When out game-shooting in India in October 1891, a comrade's fowling piece was accidentally discharged, and a charge of No. 6 shot entered the patient's thigh, midway between the tuber ischii and great trochanter, from a distance of only a few inches, making a lacerated wound of about 3 inches diameter each way. On arrival at hospital, two hours later, the pellets, or most of them, were removed under chloroform, and the wound dressed with iodoform and cotton wool. The wound healed in about three months. At first all sensation and power of motion in the limb were lost, but these to a very slight extent returned during his stay in hospital. During the treatment of the case pressure sores formed in many situations; in the popliteal space, and over the calf and heel. On arrival at Netley he was a strong, well-developed man, in good health, except for the condition of his right leg. The pressure sores above referred to had healed, but others had formed, and two were still open when he came to Netley. One scar near the ankle was darkly pigmented. Two inches below the gluteal fold, and directly over the course of the great sciatic nerve, was the cicatrix of the gun-shot wound. The muscles of the right limb were considerably wasted, the thigh measuring 2 inches and the calf 1 inch less than the same situations on the opposite side. The paralysis and loss of sensation, which had at first been absolute, had to a certain extent disappeared. The knee could be strongly extended, but power of flexion was much impaired: there was total loss of voluntary movement in the foot and ankle. On the front of the thigh sensation was perfect, and on the front and inner side of the leg; on the foot there was complete loss of sensation, except along the inner side, where sensation was normal nearly to the metatarso-phalangeal joint of the great toe. There was no sensation in the toes. The right limb was flabby and somewhat congested. The man could walk, but with difficulty, and the foot and ankle soon became œdematous. No knee reflex could be obtained on the right side, and no response to the interrupted current in the affected muscles. As no further improvement seemed likely to take place it was determined to make an attempt at suture of the injured

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nerve, or if necessary, at nerve grafting. Preparations were therefore made for engrafting a piece of a dog's sciatic nerve, if, on operation, the case were found suitable. Chloroform was administered to the patient, and an incision made through the cicatrix of the gun-shot wound; deep dissection was made to find the upper end of the nerve, and eventually and with great difficulty it was discovered firmly bound down against the femur by cicatricial tissue. It was bulbous, about the size of a small walnut. The lower portion of the nerve was then sought for, but no trace of it could be found. After a very free dissection had been made with this view, and when it had become apparent that a loss of substance and a separation of at least four inches existed between the cut ends of the nerve, the operation was abandoned as impracticable. The wound healed in due course, and the man was discharged as unfit for service. The ulcerations which occurred on the leg during the first four months after the receipt of the injury in this case, are called "pressure sores" in the notes, but they were, no doubt, evidences of the trophic lesions of the skin, due to separation from its nerve supply, as was also the pigmentation seen in some of the resulting cicatrices.

Hæmorrhoids.

Eight cases of internal hæmorrhoids were operated on. The method of operation pursued was that practised by Mr. Allingham at St. Mark's Hospital, viz., dilatation of the sphincter and ligature of the tumours. The bowels having been well cleared out by means of a dose of castor oil on the night previous to operation, and a warm water enema next morning, the sphincter was forcibly dilated, short of rupture of its fibres; each pile was then held in a vulsellum forceps, a groove snipped with scissors at the junction of the mucous membrane and skin, into which a strong silk ligature thread was laid, the pile pulled well down over it, and the ligature tied as lightly as possible on the other side of the tumour. The pile outside the ligature was then cut off with scissors and the ligature cut short. A morphine suppository was given, and a large pad of absorbent cotton wool firmly fastened on by means of a T bandage. The bowels were kept confined for four or five days after operation, and then moved by castor oil. The success of this operation for piles, and the ease with which it may be performed, leaves nothing to be desired. The dilatation of the sphincter gives perfect command of the parts to be manipulated, and it greatly reduces the pain following the operation.

Fistula in ano.

Some of the cases of rectal fistula were very extensive, having sinuses leading in many directions, and in some instances with openings on both sides of the anus, necessitating long incisions, in order to make certain that all the ramifications of the sinuses had been laid open. In this operation also, dilatation of the sphincter was always carried out. The method of dressing was to pack the incisions with iodoform gauze, and apply a large pad of cotton wool under a T bandage.

Anæsthetics.

Ether, administered by means of a Clover's inhaler, was the anæsthetic mostly used, and no dangerous symptoms were produced by it. Chloroform was sometimes used, and some notes of its effects may be of interest. One patient died from chloroform which was being administered from a Krohne's inhaler. He was about to be operated on for disease of the hip joint. A small quantity (m. 25) was placed in the inhaler to begin with; after a few whiffs of the drug respiration ceased, the pulse continuing strong. Artificial respiration was immediately commenced and continued for half an hour; electricity to the neck and slapping the patient's chest with a wet towel were tried, but with no effect whatever, and the man died. At the post-mortem 1 oz. of straw-coloured serum was found in the pericardium; there was slight increase of the sub-epicardial fat; the valves were competent; the wall of the left ventricle seemed somewhat thinned; muscular substance pale. The examination of the other internal organs showed nothing to account for the death. Dangerous symptoms occurred in three cases of chloroform anæsthesia, fortunately not followed by very serious consequences; and two of them were especially interesting in that they are further proofs, if necessary, of the danger of adhering strictly to the rules laid down by the Hyderabad Commission on anæsthetics; in both cases the pulse became imperceptible while the respiratory movements continued vigorous and effective. One of these was a boy, aged three years, on whom the operation of needling was being performed for congenital cataract. The choroform was given from a Krohne's inhaler. Just

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as the operation was completed, the child's face suddenly became pale, and the pulse was found to be absent at the wrist and in the neck. At this time the respiration was being thoroughly performed. Under the use of the interrupted current applied to the neck, friction, and ether subcutaneously, the attack of syncope passed off. The second case in which the conclusions of the Hyderabad Commission were contradicted, was one being operated on for the radical cure of inguinal hernia. Chloroform was the anæsthetic used, and twisting of the sac was part of the procedure. When this was done the patient suddenly blanched, and the pulse ceased, while no diminution of the respiratory process occurred. The patient's head was immediately lowered, electricity applied to the neck, and sponges wrung out of very hot water placed over the heart; in about five minutes the pulse was again perceptible, and all danger had passed away. Had the rule laid down by the Hyderabad Commission been carried out in these two cases, viz., that the respiration only need be taken note of during chloroform anæsthesia, they had certainly been added to the list of deaths due to this drug. The third case in which chloroform produced dangerous symptoms was in a case of circumcision. When the operation was nearly completed respiration suddenly ceased. The patient had "gone under" without struggling, and in a perfectly satisfactory manner. Artificial respiration was immediately commenced, and after about six minutes breathing was re-established. Krohne's inhaler was used for chloroform, and no better instrument for its administration is required. With its use the vapour is well diluted; the feather indicator attached to it acts to the gentlest expiration; and, with average care, none but unavoidable accidents should occur with it.

I append a report on the ophthalmic surgery of the division, by Surgeon Captain Whitehead, Assistant Professor of Surgery, Army Medical School, in whose charge the cases were, and by whom the operations were performed.

Extraction of hard cataract.

Two cases of extraction are noted, a double operation was performed on No. 2034, Private S. W——, 2nd Battalion, Dublin Fusiliers. The man's official age was given as 34, but he acknowledged that he was much older, and was probably at least ten years more than the age stated. He enlisted first in 1872, and served 12 years. Enlisted again in 1885, and had completed 7 years of the second period. In 1890 this man was a marksman, and did not notice any dimness of vision till July 1891. After this date the sight got rapidly worse in both eyes, especially in the left; and in October 1891 his sight had become so dim as to prevent his doing his duty, and he had to go to hospital. His invaliding papers state, that the man was admitted to hospital suffering from scrofulous ophthalmia, with two ulcers on the lower margin of the left cornea; and that during treatment for this complaint cataract developed. On his admission to Netley, January 18th, 1892, he was completely blind in both eyes, and had well-developed cataracts. The iris was movable, and responded to strong light. He could just distinguish a strong light in the dark room, and tell when the hand was moved across it. On January 23rd, 1892, operated with strict antiseptic precautions on the left eye, by the linear operation. Iridectomy was performed, the lens matter was somewhat soft, but came out easily. No vitreous was lost. The operation was very successful. On the 18th February the right eye was operated on, and the operation was equally successful. On April 1st his vision was as follows:—

R. E. C. + 11 D. = $\frac{6}{6}$.
L. E. C. + 11 D. = $\frac{6}{6}$.

Reads with a + 16 D. ·5 Suellen at 12 inches with each eye. The man was furnished with these glasses, and invalided from the service.

Needling for soft cataract.

The patient, aged 3 years, was the son of Staff-Sergeant G. H——, M.S.C. There was soft congenital cataract of the right eye. The cataract was needled for the first time on September 23rd, 1892. The father was shortly afterwards moved from the station, and the treatment could not be continued here. Chloroform was used during the operation, and administered by Krohne and Sesseman's inhaler. During the administration the child, who was breathing fairly, was noticed to become very pale, and the pulse was found absent at the wrist. Stimulation by electricity and friction was at once applied to the heart, and the syncope passed off. It is worth while to mention this case, as the breathing gave absolutely no indication of the approaching danger.

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This operation was performed on three occasions during the year—twice for destruction of the eye from ulcerative disease of the cornea with staphyloma, and once for the presence of a foreign body within the globe. Excision of eye.

No. 3076, Private F. B——, 1st Bn. South Wales Borderers, was admitted to Netley May 5th, 1892. The patient stated that while travelling by train in India on April 6th, 1892, a small hot cinder struck his left eye; it was removed in about 10 minutes, but had burnt his eye and caused him great pain. He was admitted to hospital the same evening at Allahabad. A perforating ulcer resulted from the injury, with an anterior staphyloma. The right eye remained perfectly sound till January 1892, when the vision became dim, and the eye weak, and inclined to water. The vision of left eye on admission to Netley was nil, of the right eye $\frac{6}{9}$; he could not read for long together as the print became blurred. The fundus of the right eye was noted as considerably congested, and the disc red, and hyperæmic. As the left eye was evidently a source of danger to the sight of the right eye, the left eye was removed by the usual method. The patient made a good recovery, and the condition of the eye improved greatly. He was fitted with a glass eye and discharged the service.

No. 2072, Private J. C ——, 2nd Lancashire Fusiliers, was admitted to hospital March 23rd, 1892. He stated that his left eye was always weak and inclined to inflame. On his arrival in India in 1890, the left eye became very painful, and much worse. Six months after his arrival in India he contracted gonorrhœa. A gleet continued for months, and during this stage his left eye suddenly swelled up and became very painful. It seems extremely probable that he inoculated his eye with some of the discharge. He went to hospital, where both eyes were much inflamed for some weeks, and the vision of his left eye was found, on his recovery, to be nil. On his admission to Netley he had a dense corneal opacity, which covered the whole surface of the left cornea, but more dense at the lower part. Vision in the left eye $= \frac{6}{\text{nil}}$; he could faintly discern light from darkness with the left eye. The intra-ocular tension of the left eye was $T = +1$.

The vision of the right eye was normal, but he had a good deal of pain in it at times, and it was weak and continued to water, especially if he attempted to read for long. The condition of the right eye became so much worse, that it was decided to remove the left eye. The operation was performed in the usual manner, and with strict antisepsis; the case did extremely well, and the right eye improved greatly after the removal of the left.

No. 3185, Private A. D——, 2nd Dragoon Guards, was invalided from Sialkote, India, with the following history:—On December 1st, 1891, he was marking in the butts at the rifle range, Sialkote. A splinter from a bullet hit him in the left eye. He was taken at once to hospital, and remained in hospital for two and a half months. Vision in the left eye was totally lost. On his admission to Netley the left eye was small and shrunken, the pupil irregular, and adherent in parts to the capsule of lens. The lens was partially opaque. The tension of the left eye was — 2. About 4 mm. to the inner side of the sclero-corneal junction, in the horizontal meridian of the eye, was a faintly marked cicatrix, with its long axis vertical. On ophthalmoscopic examination, although the lens was nearly opaque, a foreign body could be made out behind the lens, its long axis being vertical. The right eye was weak. The vision $\frac{6}{6}$, but the image could not be fixed for any length of time without becoming blurred. The disc looked much congested, and the edges of the disc were soft, and indistinct. It was considered advisable to remove the left eye. This was done. The foreign body was found to be a splinter of lead, which had perforated the lens, and lodged in the vitreous. The case did well, and the condition of the right eye improved very much.

The operation of iridectomy was performed four times for extensive posterior synechia, the result of frequent attacks of iritis of syphilitic origin. Iridectomy.

The first case was that of No. 1578, Private C. C——, East Kent Regiment, aged 28. This man contracted primary syphilis in January 1891. A secondary rash and alopecia appeared in March of the same year. About the end of May the right eye became dim, and a severe attack of iritis commenced. He was treated energetically by mercury, and atropine. This attack passed off, leaving impairment of the eyesight. He had a recurrent attack in October. He was

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invalided from India in November 1891. On his admission to the Royal Victoria Hospital, in December 1891, his vision was as follows:—

R. E. = Nil.
L. E. = $\frac{6}{9}$.

The right eye was quiet, and presented the following appearance:—The iris was changed in colour, and was of a curious greenish-yellow colour, contrasting markedly with the light brown of the left eye; but there was no loss of lustre. The pupil of the right eye was small, irregular, and bound down to the anterior capsule of the lens by a complete posterior synechia. Between the periphery and this abnormal central attachment, the iris was bowed forward all round. The pupil was completely blocked up with lymph. Cornea clear. With the ophthalmoscope no reflex was obtainable. As the bulging of the iris showed incipient tension, and recurrent attack seemed probable, an iridectomy was performed. The patient made an excellent recovery, but no improvement in sight was obtained and the man was invalided from the service.

The second case was No. 2349, Private I. B——, 2nd Battalion, Oxfordshire Light Infantry. He contracted primary syphilis in March 1891; was treated with mercury. First had iritis in the left eye in May 1891, attacked the right eye in August 1891. Had constant attacks of iritis in each eye since. His vision was—

R. E. = $\frac{6}{12}$.
L. E. = $\frac{6}{18}$.

There was complete posterior synechia of the left eye. In order to stop the frequent attacks of recurrent iritis, an iridectomy was performed January 11th, 1892. There was free hæmorrhage into the anterior chamber on section of the iris. The man made an excellent recovery, the vision of the left eye could not be improved beyond $\frac{6}{18}$. The patient was ultimately invalided from the service.

The third case, No. 2569, Private H. T——, North Stafford Regiment, contracted syphilis in March 1892. The primary chancre was situated on the anus. In this case iritis was a very early secondary symptom, appearing six weeks after the primary sore was noted, and at the same time as the secondary eruption and sore throat. Both eyes became affected. On his admission to Netley his vision was—

R. E. = $\frac{6}{12}$.
L. E. = $\frac{6}{12}$.

There was complete posterior synechia of the left eye, with increase of tension. An iridectomy was performed on the left eye; the operation did well.

No. 3197, Private C. G.——, West Surrey Regiment, contracted primary syphilis in December 1891. He first had iritis in the right eye in May 1892. Since this date he has had several attacks of iritis in the right eye; the left eye has kept clear of the disease. His vision was—

R. E. = $\frac{6}{9}$.
L. E. = $\frac{6}{6}$.

To prevent these recurrent attacks of iritis an iridectomy was performed on the right eye. The cornea wound healed well, and the patient states that the eye has been much easier in every way since the operation.

In all these cases the operation was performed with a view of preventing frequent recurrent attacks of iritis.

The sections of the iris, in all, were in the upper quadrant, and of small size. A 10 per cent. solution cocaine was usually employed to produce local anæsthesia; excellent results attended its use. Before the operation the eye was carefully cleansed, and syringed with warm boracic lotion (16 grains to one ounce), the upper cul-de-sac being especially attended to. In each case the corneal wound healed by first intention, without inflammation.

The frequency of posterior synechia as a result of syphilis is very apparent at Netley, where many invalids are ultimately discharged the service, suffering from this disability. Great care should be taken to begin the application of atropine early, from the first moment that there is any suspicion of iritis. Much valuable time is lost, and adhesions formed from loss of time, in the instillation of atropine, and thorough dilatation of the iris.

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If four grains to the ounce is not sufficient three times a day, the interval should be shortened, and the solution instilled six times a day, or a six grains to the ounce solution used. It is of the first moment to get the iris to dilate early. When this is effected the strength of the solution used may be lessened, but during the whole course of the treatment for iritis, and until all vestige of the vascular zone about the cornea has disappeared, the treatment should be continued. With the use of atropine, the constitutional treatment by mercury should not be in any way relaxed.

Iridectomy was performed three times for opacity of the cornea.

No 3,254, Private J. M.——, 2nd Battalion, Highland Light Infantry, contracted gonorrhœal ophthalmia in the following manner:—He states that in August 1891 he went down to the bazaar at Fyzabad, and into one of the women's houses there. While there he took up a towel and wiped his face. That night, his right eye became very painful, and the next morning, on account of the great pain and swelling, he had to go to hospital, and was admitted. The acute symptoms of gonorrhœal ophthalmia lasted for six weeks, in spite of energetic treatment. The left eye escaped infection. When the acute symptoms passed away he found that he was blind in the right eye. He arrived at Netley 23rd March 1892, and the following appearances were noted:—In the right eye the pupil was oval and irregular, being elongated from above downward. The iris was bulged forward, more markedly in the lower half, and there were adhesions between it and the posterior surface of the cornea in this position. At this spot there was a dense corneal opacity, triangular in shape, the base of the triangle being downwards. The depth of the anterior chamber was considerably diminished. There was increase in tension (+ 1), and the vision was $\frac{6}{\text{nil}}$. He could barely discern light from darkness. The vision of the left eye was $\frac{6}{12}$, the disc was hyperæmic, and slightly blurred. He complained of some pain and weakness in the left eye.

On account of the increase of tension of the right eye, and the involvement of the iris in the corneal capacity, an iridectomy was determined upon. This operation was performed, the section being upwards. The tension of the right eyeball returned to normal after the operation, but there was no improvement in sight. The man was invalided from the service.

No, 2,845, Private T. R.——, 2nd Battalion Derbyshire Regiment, contracted an attack of gonorrhœa on August 10th, 1891, for which he was admitted to hospital at Jubbulpore. About three weeks afterwards his right eye was suddenly attacked with intense inflammation. He believes that a towel was the means of inoculation. He was admitted to Netley in April 1892. On admission there was an oblong patch of opacity. In the centre of the cornea of the right eye the pupil was irregular, and hindered in its action by an anterior synechia, the lower margin of the iris being involved in a cicatrix, which evidently formed from ulceration of the cornea. His vision was—

R. E. only perceived light from darkness.
L. E. $\frac{6}{6}$.

There was a good deal of pain in the right eye, and the left eye was weak and watery. Tension of the right eye was not markedly increased. To relieve the pain, which was probably caused by the dragging on the iris involved in the scar, an iridectomy, upwards, was performed. The corneal wound healed satisfactorily, and the operation gave relief, but vision was not improved. The man was ultimately invalided from the service.

The third case was No. 3,185, A. D——, 2nd Dragoon Guards, and was also a case of opacity of the cornea, with anterior synechia. He stated that, when suffering from gonorrhœa, he went to bathe in the swimming bath at Penang, on February 19th, 1891. That night his right eye became very swollen and painful, and an attack of gonorrhœal ophthalmia commenced. The gonorrhœal matter seems to have been introduced by the towel. The left eye was attacked shortly after the right. After treatment for three months he recovered to a great extent. On his admission to Netley, in April, 1892, there was a dense corneal opacity of the right eye, situated at the lower part of the cornea, triangular in shape, with the base of the triangle downwards. The pupil was irregular, elongated in its vertical diameter, and an anterior synechia existed in the lower margin of the iris. The tension of the right eye was in-

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creased, and there was a good deal of general photophobia, and weakness, of the left eye. The optic disc in the left eye was hyperæmic and blurred. To relieve the condition of the left eye, which was, no doubt, dependent on the irritation kept up by the dragging of the iris on the right side, an iridectomy upwards was performed on the right side. The wound did very well, and marked relief of the condition in the left eye was experienced. The man was ultimately invalided from the service.

Remarks.—In these three cases the condititon was very similar. Gonorhœal ophthalmia, ulceration of the cornea, and involvement of the iris in the cicatrix, which latter caused the opacity of the cornea. In the three cases operated on the vision was almost *nil* in the affected eyes, a mere perception of light from darkness existed. The implication of the iris in the cicatrix, and the consequent dragging on this structure in its dilatation and contraction of the pupils, caused chronic irritation of the unsound eye, and damage to the sound one. By setting the iris at rest by iridectomy, the danger of sympathetic inflammation of the sound eye was, to a great extent obviated.

An iridectomy was performed for vision in one case, that of No. 187, Private A. B.——, 1st Battalion, West York Regiment. The history was as follows:—In 1889, while involved in a row in the canteen, he was struck in the left eye by a mug. He was admitted to hospital at Meean Meer, and suffered from tramatic iritis. There was an ulceration of the cornea, and prolapse of the iris. The vision was very bad in the left eye after the accident, and had steadily got worse, so that he could only count figures at five yards with difficulty on his arrival at Netley, in January, 1892. The vision of the right eye was $\frac{6}{6}$, and that of the left, as noted before. The pupil of the left eye had been drawn across to the upper and inner angle; and the centre of the eye was filled up by a layer of the iris like a curtain. No effect was produced by atropine. As the fundus was considered to be probably healthy, an iridectomy in the lower and outer quadrant of the eye was performed with a narrow needle, and a central pupil made. The case did well; his vision in the left eye improved to $\frac{6}{36}$, and was improving when he left the hospital.

Paracentesis of anterior chamber.

The first case, that of No. 1,919, Private W. B.——, 1st Battalion, Munster Regiment, was performed for ulcer of the cornea. The patient was admitted to Netley, 20th November 1891. He was invalided home from India with conjunctivitis. On the voyage home he caught a severe cold in the eye, and on arrival at Netley his condition was noted as follows:—"Much photophobia, "with orbicular spasm of the right eye. On attempting to examine it, he com- "plained of great pain, and only glimpses could be obtained. There was well- "marked circum-corneal congestion." The state of the iris could not be made out as the cornea was steamy. There was most intense headache, and great pain in the eyeball. He was evidently suffering from a severe attack of cyclitis. Leeching, hot pads, cocaine, and atropine, and a smart purge, reduced the inflammation; and, on further inspection, an ulcer on the upper quadrant of the right eye was found. This ulcer showed no signs of healing under treatment, and frequent fresh attacks of inflammation of the eye occurred. In order to set the ulcer at rest the anterior chamber was tapped through the base of the ulcer, and the floor of the ulcer at the same time divided. This operation was followed by a good deal of temporary relief, but the ulcer did not seem inclined to heal, and continued in a very chronic state. The eye had been covered by a pad for some months, and it appeared that probably the warmth and moisture afforded by the pad, was keeping the eye in an unhealthy condition. On omitting the pad and substituting goggles the improvement was most marked, and the ulcer ultimately healed completely.

The second case was that of No. 3,545, Private J. H ——, 2nd Royal Irish Regiment. This man evidently jolned the service with a tendency to a conical condition of the cornea. On his arrival in India, this condition increased; attacks of conjunctivitis became frequent, and the cornea seemed to have given way at the most prominent part of the cone. At this point an opacity existed. As the cornea was very conical, and the walls of the anterior chamber thin, the cornea was tapped on several occasions, and firm elastic pressure applied. During his stay in hospital, the state of the eye improved considerably. The man was ultimately discharged from the service as unfit for duty.

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In this case, tapping of the anterior chamber was performed on several occasions, for hypopion. No. 2,272, Private J. K——, 1st Battalion, Cheshire Regiment, contracted primary syphilis at Belgaum, in February, 1891. The primary sore was followed by the usual secondary manifestations, and he had numerous admissions for secondary syphilis, between the date he first contracted the disease, and the date he was invalided to England, February, 1892. He arrived home at the end of March, 1892, in a very debilitated condition; suffering from periosteal pains, and syphilitic cachexia. In May, 1892, he developed a very severe attack of iritis in the right eye. The symptoms were very acute, and hypopion formed, which was treated on several occasions by tapping. The suppurative process attacked the rest of the tissues, and panophthalmitis became developed, with total destruction of the right eye.

Excision of fibrous tumour of the conjunctiva.

No. 3,454, Private A. B.——, 3rd Dragoon Guards. This was an interesting surgical case. The patient, a cavalry soldier, met with a fall whilst riding, and sustained an injury to the thigh, which was diagnosed as a rupture of the sartorius muscle. On admission to Netley he had a distinct round swelling at the upper and inner part of the right thigh, over scarpa's triangle. All the movements of the thigh were perfect, but the limb felt weak. The case was not one of ordinary rider's sprain, but it is probable that some of the upper fibres of the adductor muscles were ruptured. He was admitted to the ophthalmic ward with a small congenital yellow fibrous tumour, about the size of a pea, situated on the outer side of the left eye. It encroached slightly on the cornea, and grew from the conjunctiva, being adherent to the sclerotic. The growth was dissected off, under the influence of cocaine. No recurrence occurred during his stay in hospital.

Remarks.—The loss from the service due to various eye diseases is large, and a brief *resumé* of the principal causes of invaliding from this cause may not be out of place. We have already noted the loss that occurs from syphilis. One of the chief forms of invaliding for this disease, from an ophthalmic point of view, is as a result of iritis, and the formation of posterior synechiæ. We have under the heading of iridectomy expressed our views, that an early application of atropine, locally, in sufficient strength to dilate the pupil quickly, in any doubtful case, would do much to lessen the chances of permanent adhesions, and that this drug should be continued until all signs of a vascular zone round the cornea has disappeared. Another important cause of damaged eye-sight is from gonorrhœal ophthalmia, the danger of infection by the discharge should be impressed fully upon patients and attendants.

Three cases of gunshot injuries of the eye came under notice. In one the eye was removed as the sound eye was undoubtedly seriously threatened. The man's case is noticed under this heading in the details of operations. He was struck in the eye by a splash from a bullet whilst marking in the butts. A second case, that of Private F. J——, 1st Royal Highlanders, who was admitted to Netley from Gibraltar. A splinter from a small bullet, used at the Morris Tube Range, caused the mischief. The splinter entered the right eye and passed through the lens, which became opaque on his admission to Netley. Enucleation of the unsound eye was advised, but the man declined to submit to the operation.

In the third case, that of No. 1757, Private J. C——, 2nd Battalion Royal Munster Fusiliers. The man, while undergoing military training, was extracting a blank cartridge from the breach of his rifle. The cartridge exploded and destroyed the right eye; the vision was completely destroyed. The shrivelled globe remained in the socket and was not removed. The danger from splinters of the bullets striking the men in the marking butts is well known to medical officers, and the danger of loss of eye-sight might be considerably minimised by making it compulsory for the markers to wear strong goggles while engaged in this duty.

A large number of cases have been discharged the service this year for conjunctivitis. It cannot be too strongly urged, that the least tendency this way in a recruit, or the slightest history of such affection in early life, should be sufficient to disqualify from military service. The glare and dust of the tropics is certain to bring on a recurrence of this affection, and to ultimately lead to invaliding after much time wasted, and many admissions to hospital. Constant use of strong caustics to the lids is to be deprecated as leading to a scarred and contracted condition of the lids.

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Several cases of errors of refraction have had to be dealt with. An interesting case, showing the increase of myopia in the tropics came under observation. No. 2049, Private C. B——, 2nd Battalion, Liverpool Regiment, aged 23, enlisted in 1886. He passed the test with the test dots, showing that his myopia was under — 1·75 D, as with more than this he could not have passed the test. He went to India in 1888. On his examination at Netley in January 1892 he was found to have 7 D of myopia in the right eye and 9 D in the left. Assuming that the test was carefully applied in the first instance, and there is no reason to think it was not, the increase of myopia was remarkable. Most of the cases which come before us are those of hypermetropia and hypermetropic astigmatism. In these, accommodation which was active on enlistment, had begun to fail, and hence the failure of vision. The effect of long-continued fevers is very noticeable in this respect.

Several cases of optic atrophy were admitted. The causes seemed to be various—syphilis, over stimulation of the retina by glare, and blows on the head, were some of the causes assigned. One very remarkable case of atrophy of one eye deserves to be recorded. No. 2366, Lance-Corporal G. S——, 2nd Battalion, West Riding Regiment, stated to Surgeon-Captain Inman, Army Medical Staff (to whose notes we are indebted), that while bathing at Barbadoes, on July 21st, 1891, he had been struck in the eye by a fish. He presented when admitted to hospital at Barbadoes a small lacerated wound beneath the right orbital ridge, at the junction of its outer and middle thirds. On examination with the finger, a rough body was felt imbedded in the orbit. This required some amount of force for its removal, having apparently passed from the outer side, downwards and inwards, behind the eyeball, to be wedged into the bones on the inner side of the orbit. The foreign body was found to be the bill of a fish, 2½ inches long; the greatest width was ½ of an inch, and it was armed with six teeth, the longest of which was ¼ of an inch. The eyeball, which had been apparently levered forward, protruded considerably, and was fixed and immovable. The conjunctiva on the edge of the globe was torn transversely. There was some ptosis. The pupil was widely dilated, and reacted slowly, and there was no vision except the perception of light. On his admission to Netley, April 18th, 1892, there was found to be marked atrophy of the right optic disc.

In spite of the large consumption of tobacco by soldiers no case of undoubted tobacco amaurosis came under notice during the current year.

Of new treatment we have little to record. Massage has, in our hands, been very beneficial in cases of opacity of the cornea, but should be used with regularity, and for some time. The method employed at Netley is as follows:—An ointment of 2 grains of the yellow oxide of mercury to one ounce of vaseline, is used as a lubricant, a quantity about the size of a small pea is placed on the under side of the lower lid, which is drawn down for this purpose. The eye is then closed, all superfluous ointment is wiped off, and methodical friction from the nasal, to the outer side is made over the globe, combined with occasional circular friction. The upper lid should move freely on the eyeball, and must not be allowed to get greasy on its surface. The friction should be employed for five minutes daily. It is followed by some redness, which passes off in about half an hour. The treatment must be systematically employed for some weeks. The irritable and watery eye bears the treatment badly. Corneal opacities are the lesions which give the best result from this treatment; but glaucoma, hypopion, sclerotitis, and embolism of the central artery of the retina, have all been successfully treated by the method, which from its simplicity renders it easy of application.

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APPENDIX No. III.

REPORT ON A MISSION TO PARIS IN APRIL 1892 TO ATTEND THE SIXTH SESSION OF THE FRENCH SURGICAL CONGRESS, WITH THREE PLATES.

By Brigade-Surgeon Lieut.-Colonel C. E. HARRISON, M.B., F.R.C.S., Grenadier Guards.

In compliance with orders conveyed to me in War Office letter No. $\frac{4800}{7}$ / 1534 and dated 11th April 1892, to attend the sixth session of the French Surgical Congress which assembled in Paris on April 18th, I left London on Friday, April 15th, as I was informed that it was advisable that I should report myself on Saturday, the 16th. I remained in Paris in attendance on the meetings, which concluded late on the afternoon of Saturday, the 23rd of April, and left for London on the evening of that day, reporting my return to the Director General, Medical Staff, on Monday the 25th. — General remark

The meetings took place in the amphitheatre of the Faculty of Medicine, and were largely attended. The only language used at the Congress was French. M. Demons, Professor of the Faculty of Medicine, of Bordeaux, was President for the year, and M. Lannelongue, of Paris, was Vice-President. The General Secretary was M. S. Pozzi, of Paris, and the Assistant General Secretary was M. Picqué, also of Paris. — Proceedings of the Congress. President of the Congress. Vice-President, General, and Assistant-General Secretary.

The Honorary Presidents chosen for the occasion were M. Gross (of Nancy), M. Poncet (of Lyons), M. Rochard (of Paris), M. Auffret (of Brest), M. Bloch (of Copenhagen), M. Erhmann (of Mulhouse), M. Ceci (of Genoa), M. Potaillon (of Paris), M. Roux (of Lausanne), M. Thiriar (of Brussels), M. Terrier (of Paris), M. Hicquet (of Liège), and myself, from England. — Honorary Presidents.

It was doubtless with a view of paying a compliment to England, and in recognition of the fact that the British Government had sent a delegate to attend the Congress, that I was requested by the President to accept the honour of presiding on the second day of the meeting.

Three subjects had been previously chosen for special discussion, viz. :— Subjects discussed.

i. The pathogeny and treatment of the various forms of surgical gangrene.
ii. The pathogeny of infective symptoms in lesions of the urinary apparatus (urine fever).
iii. Surgical operations on the biliary tracts.

Papers on numerous other subjects were also read by members of the Congress.

The hours fixed for the meetings were from 9 to 12 o'clock in the morning, and from 2 to 5 o'clock, or later if occasion required, in the afternoon, except when the time was specially devoted to visiting hospitals or other places of professional interest. Thus on Monday, 18th, commencing at 9 a.m., the morning was occupied by reading papers on various surgical subjects. At 2 p.m. the official opening meeting of the Congress was held, and at 3 p.m. the reading of papers was continued. On Tuesday, 19th, the morning was devoted to visiting hospitals. I took the opportunity of visiting the Hospital — Arrangement of the work of the Congress.

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Trousseau (rue de Charenton), being anxious to see M. Lannelongue demonstrate his system of treating tubercular affections by his sclerogenic method. In the afternoon a paper was read by M. Jeannel on the pathogeny and treatment of surgical gangrene, and papers on other subjects were also read. On Wednesday, 20th, the morning was occupied in reading papers, and in the afternoon papers on the subject of the pathogeny of infective symptoms in lesions of the urinary apparatus were read by Professor Guyon, Mr. Reginald Harrison, Dr. Reliquet, and Dr. Hosteloup. On Thursday, 21st, the day was devoted to visiting hospitals and places of interest. In the morning I accepted a kind invitation from Professor Delorme to visit the military hospital and medical school of the Val de Grâce, and in the afternoon I visited the Pasteur Institute. On Friday morning, 22nd, papers were read on various subjects, and in the afternoon M. Terrier and others read papers on the surgical operations on the biliary tracts. Other communications followed. On Saturday, 23rd, the morning was devoted to visiting hospitals, and in the afternoon a committee meeting was held at 2 p m. for choosing the President and officers for next year, and at 3 p.m. the official meeting to close the Congress. This was followed by the reading of other papers, as the time allotted during the week had not proved sufficient to deal with the large number of communications which had been submitted. I devoted the greater portion of this day to an inspection of the military medical and surgical stores and appliances at the Magasin Central and the "Docks du Service de Santé militaire," having received an official sanction from the War Minister in response to an application which I had forwarded to him. Dr. Schneider, attached to the Ministry for War, most kindly accompanied me, and gave me very full information on the many objects of interest which were to be seen.

I feel that it would be impossible to do justice to the many and valuable papers which were read, but they will be published in full in the transactions of the Congress.

Hospital of the Val de Grâce,

Speaking first of the subjects of purely military interest which I saw, I would mention the Hospital of the Val de Grâce. The military medical school attached to this hospital has already been most ably and fully reported upon by Sir Thomas Longmore in his Report on a Mission to Paris in October 1889.

Recent improvements and additions to the Military School of Medicine.

The chief recent improvements and additions to the school which were pointed out to me are:—

(i.) Laboratories of Bacteriology and Histology.

(i.) The laboratories of bacteriology and histology. Great importance is attached to the courses of study in these subjects for the medical candidates, and advanced courses are also held for "médicins majors." All medical officers of this rank have to attend a course of instruction. These laboratories are situated in a special building, and rooms are attached for the Professor of bacteriology in which to carry on his experiments on animals.

(ii.) Animal vaccine establishment.

(ii.) The Animal Vaccine Establishment. Arrangements have been made here for the vaccination of recruits and reserve men on an extensive scale. A beautifully arranged stable exists in which the calves furnishing the vaccine lymph are kept. I would here mention the strict regulations which exist regarding vaccination in the French army. All recruits are vaccinated on joining, and all reserve men when called up, unless their medical history sheets show that they have been successfully vaccinated within the previous eight years, or unless they produce a certificate from a qualified medical man of successful vaccination within eight years. In case of epidemics of small-pox, all men whose vaccination has not been successful must be re-vaccinated, and also all those men who have been successfully re-vaccinated at a date prior to five years. Vaccination and re-vaccination must be effected by three punctures or scarifications. The vaccine generally used is animal vaccine. Five centres, or vaccine establishments, have been instituted for providing lymph for the army, of which the institution at the Val de Grâce forms one. In the event of animal lymph not being obtainable, human lymph is directed to be used, and an indemnity is allowed to be paid to the amount of 15 francs to the mother of each child providing the lymph.

(iii.) Museum of Pathological Anatomy and

(iii.) Museums of Pathological Anatomy and of Military Hygiene. These are in distinct buildings. A very interesting feature in the former is the

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valuable and extensive collection of bones showing the results of experiments performed by M. Delorme, the Professor of Military Surgery, on the relative effects produced upon bones by the projectile of modern rifles which has an outer casing of hard metal, and of the leaden bullet of the rifle formerly used. I would here express my sense of gratitude to Professor Delorme and the other professors of the Val de Grâce whose great courtesy enabled me to see in detail the many objects of interest which the hospital and school contain. It may be of interest to record here the results which were obtained by Professor Delorme in his experiments, in which he was assisted by M. Chavasse. Their interesting report furnishes the following facts:— of Military Hygiene

(*a.*) The differences observed in the effects produced by the projectile of the rifle (Lebel) of 8 millimetres as compared with the leaden projectile of the rifle (Gras) of 11 millimetres are due, for the most part, to the greater force of penetration of the former, to the difficulty in producing alteration in its shape, and to its smaller diameter.

(*b.*) In the case of both bullets, especially when they encounter a resisting bone, the destruction increases with the velocity.

(*c.*) The injury inflicted on a limb increases also with the velocity, and according as a bone is struck or not, but it is much more marked with the bullet of the Gras rifle.

(*d.*) The explosive effects, in the case of shots at very short range, are the same for the two projectiles. These effects are still observable at a range of about 300 metres when the Lebel rifle bullet (8 millimetres) encounters a resisting diaphysis; whilst with the leaden bullet of the Gras rifle (11 millimetres) they are not observable beyond a range of 100 to 150 metres.

(*e.*) The cutaneous wounds of entrance, always accompanied by loss of substance in the case of both projectiles, increase in size with the velocity, whilst they do not, unless exceptionally, exceed the diameter of the body producing the wound.

(*f.*) The wounds of exit of the bullet of the Lebel rifle of 8 millimetres are more often rounded than those of the bullet of the Gras rifle of 11 millimetres.

The lesser dimensions of the wounds of entry and of exit, and of the track of the bullet of 8 millimetres more nearly bring the wounds of this projectile to the conditions of subcutaneous lesions, a circumstance favourable for their more easy and more rapid healing.

Wounds of exit of the size, as regards diameter, of the index finger or thumb produced by both bullets, indicate a comminuted fracture with free splinters; but for the bullet of 8 millimetres a ragged wound of exit, admitting the little finger, gives rise to a suspicion of this lesion. The same indications can be furnished by the rents in the clothing at the point of exit.

(*g.*) In the case of shots fired at equal distances, beyond the zone of explosive effects, the experiments show that the types of fracture of the diaphyses remain the same.

Between 300 and 800 metres, the bullet of 8 millimetres produces effects a little different from those of the bullet of 11 millimetres. These differences consist:—

(i.) In a splitting of the cortical layer at the point of contact, with retrograde projection of osseous particles in the track of entrance.

(ii.) In the greater propulsion of little fragments into the medullary canal.

(iii.) In the division and more complete separation of splinters belonging to the second bony wall traversed.

(iv.) In the smaller quantity of splinters driven into the canal of exit; the musular track is more cleanly cut out.

(v.) In the extension to lesser distances of fissures in the two fragments.

To sum up—apart from these differences of secondary order—the gravity of the fractures produced by the two bullets, at these distances, is almost equal.

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From 800 to 1,200 metres, for the Lebel bullet of 8 millimetres, the comminution is less, the separation of free splinters is not so frequent, the opening up of fissures is less pronounced, the projection of splinters into the track of exit is less considerable. Therefore these fractures appear to present less gravity.

From 1,200 metres the bullet of the Lebel rifle of 8 millimetres appeared to cause fractures comparatively more comminuted than the leaden bullet of the Gras rifle (11 millimetres).

The perpendicular fractures by direct impact—frequent with the bullet of 11 millimetres—become quite exceptional with the bullet of 8 millimetres.

Fractures by impact at a tangent are more often accompanied by isolated fissures on the surface opposite to the point of impact with the bullet of 8 millimetres, which is less subject to alteration in its shape.

(*h.*) On the epiphyses and short bones, fractures and perforations of the same type are obtained with both bullets. But, without taking into account the shots producing explosive effects, the bullet of 8 millimetres causes fissured tracks which are generally less extensive, and with fragments less displaced and splinters which are smaller and less detatched, whilst simple perforations of the bone are more numerous.

To sum up—the joint lesions caused by the Lebel bullet are, in general, less comminuted and less serious.

(*i.*) On the flat bones the lesions are almost comparable, with the only difference due to the relative dimensions in the diameter of the two projectiles. Here, again, the bullet of 8 millimetres, at medium velocity, produces a retrograde projection of splinters in the muscular track of the wound of entrance.

On the cranium, grooving of the bone is much more frequent, with cleaner, almost abrupt, edges, with the bullet of 8 millimetres. In perforations of the cranium the direction of the fissures is identical for the two projectiles according to the point struck; the orifices of entrance and of exit of the bullets of 11 millimetres, which are subject to alteration of shape, are relatively larger than those of the bullets of 8 millimetres.

(*j.*) With similar velocities, outside the zone of explosive effects, the bullet of 8 millimetres produces on the bones destructive effects comparatively less severe than those of the bullet of 11 millimetres.

(*k.*) The bullets of 8 millimetres lodge more rarely in the tissues than those of 11 millimetres.

The former undergo less frequently than the latter alterations of shape or splinterings, which are found by preference in the case of fractures of the diaphyses.

Fragments of lead or of the envelope of the bullet of 8 millimetres are liable to lodge in the bony or muscular track.

The bullets of 11 millimetres leave behind, almost as a rule, on a level with the seat of the fracture, particles of lead projected in different directions. With the bullet of 8 millimetres this is of less frequent occurrence, and the fragments are always less numerous.

The surgeon will have, therefore, still to count in the future on the presence of projectiles or of their fragments in the tissues.

(*l.*) The projectiles of both rifles, in their passage through the clothing (cloth, shirt, or leather), sometimes detach shreds, irregularly rounded in shape, which generally lodge in the sites of the fractures, and fine threads which line the track of the projectile in the soft parts.

Professor Nimier, of the Val de Grâce, states that, as a result of his experiences, he finds, with the projectile of the Lebel rifle as compared with that of the Gras rifle, the cutaneous wounds, the muscular sinuses, the perforations of the arteries, and the intraosseous tracks are, at equal ranges, narrower, cleaner, and less lacerated. This he attributes to the smaller diameter of the former projectile.

At long range the wounds of compact bones are more extensive comparatively than at a short range, but in the former case the

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splinters are attached by periosteum, whilst in the latter there is a veritable loss of substance by the destruction of the periosteal envelope and the displacement of the fragments.

With the new rifle the projection of splinters into the track of the wound in the neighbouring tissues is, on the side of the wound of exit, much less pronounced and much rarer than with the leaden bullets.

At long ranges (2,000 or 12,000 metres) the Lebel bullets produce in soft parts, and in spongy bones, lesions less extensive and less severe, and in compact bones more complicated fractures than the leaden bullets of the old arms.

At short ranges (200 metres and less) their action seems to become almost the same as that of projectiles without hardened envelopes; nevertheless, the effects called "explosive" have appeared less frequent.

At medium distances (1,200 to 400 metres) the advantage, from a humane point of view, of the new bullet exists chiefly in the absence of change of shape which limits the destruction, and in the absence of lodgment in the tissues.

At all ranges the extreme rarity of lodgment of the bullet removes one of the most common causes of disquietude for the wounded man, and of embarrassment for the surgeon.

Judging by his experiences he considers that the conditions of military surgery, excepting for the greater number of wounded, will not be considerably modified by the employment of the new rifles.

The projectile used with the recently introduced Berthier rifle being almost identical in composition and in muzzle-velocity, the effects produced may be considered the same as those obtained with the Lebel rifle.

The actual results of the modern rifle bullets were seen in the recent riots which occurred at Fourmies, when it was necessary for the troops to fire upon the rioters. Nine were killed and thirty-three were wounded, but of the latter not one required amputation and not one died.

(iv.) A "Salle d'honneur" has been instituted to favour *esprit de corps* and emulation amongst the medical candidates and the medical officers of the army. In this hall are recorded the names of those who have specially distinguished themselves. (iv.) Salle d'honneur.

(v.) A new laundry has been built. This is superintended by a sister. (v.) Laundry.

(vi.) A new disinfecting apparatus (invented and manufactured by Geneste, Herscher and Company, 42, Rue du Chemin-Vert, Paris) has been introduced into the sanitary service of the Army, and great importance is attached to this new appliance. There are two official patterns, stationary and movable. Disinfection is effected by means of steam. An apparatus of the former variety was shown to me in a building adjacent to the laundry where the process is carried out (*vide* illustrations). (vi.) Disinfecting apparatus.

Each army corps has one stationary, and one, two, or up to five, portable appliances of this description. In the event of an epidemic of infectious disease breaking out in any outlying station, a portable apparatus is sent from the head-quarters of the army corps.

I am informed that all the clothing of soldiers on admission to the Hospital of the Val de Grâce is disinfected by steam, and the hospital clothing likewise on the man's dismissal from hospital. Attached is an illustration of the above-named apparatus, which is capable of disinfecting not only the clothes, but the bedding and mattresses.

I would here remark that a building containing an apparatus for disinfecting by means of hot air exists also in the new military hospital at Berlin.

(vii.) In the hospital grounds at the Val de Grâce were erected specimens of the tents which are authorised for hospital purposes in the French Army, or which are on trial. They comprised the— (vii.) Tents.

Tente Tollet, or tortoise tent, with iron supports. This pattern is found to be especially useful.

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Baraque Doecker, or Doecker huts.
Baraque espitallier.
Tente Herbet.
The last two are on trial.

Main building, offices, officers' wards, baths.

The main building of the hospital of the Val de Grâce was formerly a convent, and is built in the form of two squares side by side, and having a court-yard in front. These buildings are used partly as offices and partly as apartments for sick officers. There is also here an extensive series of baths for officers and men. The two quadrangles formed by the main building are laid out as gardens.

Wards for soldiers.

Running at right angles to the back of the building are three parallel blocks of two stories, which are of more recent construction and devoted to the accommodation of sick soldiers. The wards are very large and airy, with windows at each side and opposite to one another. The beds are ranged at right angles to the outside walls, but there are also two lines of beds placed in the opposite direction (*i.e.*, placed parallel with the length of the building), in the centre of the ward. Notwithstanding, many improvements, the hospital is deficient in many modern sanitary points.

Proposed new officers' pavilion.

In rear of and surrounding these wards is a garden of considerable extent, and it is proposed to build here a pavilion for the accommodation of sick officers, as the old building is not satisfactory.

Cases of interest.

Many cases of considerable interest were shown to me; for instance, a case of removal of the scapula, upper extremity, and a portion of the clavicle for sarcoma, cases of radical cure of hernia, a case of removal of a portion of a lumbar vertebra for caries, a case of subperiosteal removal of a considerable portion of the humerus for necrosis, a case of hysterical anæsthesia of the lower limb, &c.

The wards for officers and soldiers are 19 in number. There are six small wards for isolating dangerous insane patients. A great many sick officers are received coming from all parts of France and the colonies. They can demand to be treated here rather than at the hospitals which are provided for their garrisons. Sick men from other military hospitals of Paris and the provinces are received whose cases are of special interest or require special care.

Other military hospitals in Paris.

There are four other military hospitals in Paris, not including the Hôtel des Invalides.

Proposed new hospital.

It is proposed to commence next year the erection of a new military hospital for Paris, containing 600 beds, in the park of St. Cloud. It is to be in connexion by means of lines of tram-cars with the various barracks from which it is to receive the sick.

Hospital and infirmary arrangements in the French army

It may be of interest to mention here the arrangements which exist for the treatment of sick soldiers in regimental infirmaries and in military and civil hospitals.

Sick soldiers are, according to the gravity of their ailments, either treated in their regiments or are sent to hospital. For the lighter cases, in which men are treated with their corps, are provided :—

(*a.*) Regimental infirmaries.
(*b.*) Hospital infirmaries.
(*c.*) Convalescent depôts.

Regimental infirmaries.

(*a.*) Regimental infirmaries are instituted to allow soldiers being treated in their regiments who suffer from ailments the gravity of which does not require that they should be sent to hospital. These infirmaries can receive also soldiers leaving hospital during their period of convalescence, and until they are in a state to resume their duties. Regimental infirmary orderlies are employed, and are provided with a manual and a dressing case. The number of beds in the regimental infirmary is laid down as 2½ per 100 for infantry, and 3 per 100 in the cavalry. 20 cubic metres of air must be allowed for each patient. The regimental infirmary orderlies are employed not only in attendance on the patients, but as instructors of the regimental stretcher bearers.

Five descriptions of diets are issued, according to the nature of the cases, to patients in regimental infirmaries. Extras are also allowed.

Soldiers belonging to corps which have no regimental infirmaries of their own, and soldiers isolated from their corps, are received into that regimental infirmary which is detailed to provide accommodation for them by the General Commanding the sub-division.]

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In stations where there are several detachments belonging to different corps, one infirmary can be organised by the authority of the General commanding the Corps d'Armée for the sick of all these detachments. This is called a garrison infirmary. Garrison infirmary.

(*b.*) Hospital Infirmaries.—In garrison towns unprovided with hospital resources, and situated at too great a distance from a military or a "mixed hospital," regimental infirmaries can be converted into hospital infirmaries. These, then, receive the sick which, in principle, should only be treated in an hospital. The *personnel* is composed of regimental infirmary orderlies, and, if necessary, of hospital orderlies. The diets are the same as in the regimental infirmaries. Hospital infirmaries.

(*c.*) Convalescent depôts can be established for the reception of soldiers who, on leaving hospital, are not in a condition at once to return to duty. These patients are detailed by the Generals commanding the sub-divisions, on the proposal of the medical officers in charge of military hospitals, or of the military wards in civil hospitals. The establishment or suppression of these depôts is in accordance with orders issued by the Minister for War. Convalescent depôts.

If a sick soldier is considered to be suffering from an illness which renders it advisable that he should be sent to an hospital rather than to his regimental infirmary, he is admitted into either a military hospital or into a civil hospital belonging to one of two classes to be presently described.

Military hospitals, strictly so-called, are divided into— Military hospitals.

(*a.*) Permanent hospitals, to which can be attached annexed hospitals. Permanent hospitals.

(*b.*) Mineral water hospitals. Mineral water hospitals.

There are six classes of military hospitals, according to their degree of importance. Hospital orderlies are employed in nursing the sick ("infirmiers militaires" as compared with "infirmiers régimentaires" employed in the regimental infirmaries). Sisters belonging to religious orders are still employed in those hospitals in which their presence is approved of by the Minister for War. 40 cubic metres is allowed for each patient as air-space, and not less than one metre must be allowed as the distance separating each bed. Two metres must be allowed between each range of beds. Regimental infirmary orderlies. Hospital orderlies. Sisters. Cubic space in hospital.

Military hospitals for treatment by mineral waters belong to the State, but sick soldiers are also sent to places in which the sources of the mineral springs do not belong to the state, arrangements being made with the proprietors for their reception. Selection of suitable cases is made each year, and in the same manner cases are chosen each year for residence at the seaside, and for the benefit of sea-bathing, distinction being made between those patients who require to be kept in hospital and those who need not be resident in hospital. Mineral water hospitals.

Civil hospitals are also utilised for the accommodation of the sick of the army during time of peace. In the year 1877 a law was passed relative to the organisation of the hospital services of the army in the military and in the civil hospitals. This law enacted that:— Civil hospitals utilized for sick of army.

> Each Corps d'Armée of the interior should have in the region which it occupies, and if possible at headquarters, a military hospital destined for the special instruction of the *personnel*, and the preparation and maintenance of the *matériel*, for a Corps d'Armée for hospital service in case of mobilisation.

With the exception of these "regional" hospitals, the permanent hospitals of the governments of Paris and Lyons and the hospitals at the medicinal springs, all the other military hospitals might, by the law above referred to, be successively suppressed when, in the towns where they existed, civil hospitals appropriated to this purpose should be in a condition to ensure at all times a military medical service. In the localities where military hospitals do not exist, and in those where they are insufficient, civil hospitals receive and provide for the sick of the army who are sent by the military authority.

The civil hospitals are for this purpose divided into two groups:—

(*a.*) Mixed or "militarised" hospitals.

(*b.*) Civil hospitals strictly so-called.

(*a.*) In the first group are classed the civil hospitals where are wards specially reserved for sick soldiers. Always when a garrison reaches the number of 300 men, the sick are cared for in special wards, and submit as far as possible, with regard to hospital *régime*, to the rules in force in military hospitals.

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(*b.*) In the second group are classed the hospitals in the towns where the garrisons do not number 300 men, and in these the sick soldiers are cared for in ordinary wards, if it is not possible to have special wards, and are placed under the *régime* of the civil hospital.

When the effective strength of a garrison is 1,000 men at least, the treatment of the sick is always confided to military surgeons; below this strength the sick are attended by military surgeons whenever the *personnel* of the garrison shall permit. In case of insufficient *personnel*, the medical attendance in the military wards is performed by civil surgeons.

In the civil hospitals strictly so-called the sick of the army are cared for by civil surgeons.

When the sick soldiers are attended by the civil surgeons the surgeon of the garrison has the right to visit them, but under no pretext whatever can he interfere in the treatment or give orders regarding the nursing.

In the mixed or "militarised" hospitals, with the exception of the surgical instruments, of which the acquisition, the maintenance and the renewal are at the charge of the State, the necessary material for the treatment of the sick soldiers is furnished and maintained by the hospital. They are treated as regards the medical attendance, the feeding and the pharmaceutical *régime*, conformably to the rules of the medical regulations of the army. The Minister of War can, as he judges necessary, cause the nursing in the military wards to be performed by hospital orderlies of the army, of which he fixes the number, or by civil servants who are furnished by the hospital.

In the "civil hospitals strictly so called," sick soldiers are treated in all respects like civilian patients, and are placed under the general *régime* of the establishment. Military sick are not placed in civilian wards unless it is impossible to assign to them special wards.

Military docks. Magazin central.

In speaking of the many subjects of interest which were shown to me at the military "docks" and the "Magazin central," I would first mention an

New apparatus for transport of sick on railway.

apparatus for the transport of sick and wounded in railway waggons, or on board river steamboats, which has quite recently been adopted by the French War Office. It is called a "suspension apparatus for the transport of wounded," invented by MM. Bréchot, Desprez, and Ameline, and improved and manufactured by MM. Geneste, Herscher, and Somasco, 42, Rue du Chemin Vert, Paris. (*Vide* illustration.)

The apparatus is composed of an iron cage constructed to receive 3 stretchers superposed. This cage is formed by two uprights M, M, (*see* accompanying illustrations) united by four connecting traverses, T, T, T^1, T^1. Each upright is composed of two iron columns, C. C, of which the lower extremity bears a foot, S, S, to rest on the ground. The two columns, C, C, of one upright are bound together by means of three arched interties, E, E, E.

They support by the medium of six springs, R, R, R, three stretcher-bearing traverses P, P, P.

All the uprights are of the same pattern and interchangeable. The joining traverses connecting the uprights are terminated by wormed rods fixed to the uprights by means of nuts, L, L.

A railway waggon will receive either four of these iron cages, one being placed in each corner of the waggon, or five, the fifth being placed in the centre of the waggon.

Experiments have been made in the practical use of this apparatus, and I am informed that the cage stretcher-supports remain firm without being attached to the walls or floor of the railway waggon. In testing this point the waggons containing the supports were brought to an abrupt standstill by means of powerful breaks.

The springs supporting the stretchers, and marked R in the illustration, are of importance. They are cleverly designed, the principle being double spiral steel springs, of which one is stronger than the other.

The apparatus when taken to pieces is very portable.

The instructions given for putting together the apparatus are as follows :—

It is advisable to have two men for his operation, but one man can, in case of necessity, complete the work.

One man takes an upright, M, the arched portion of the interties being turned outwards, and places it in a perpendicular position on its feet S, S; the second man brings two connecting traverses, T, T, unscrews the nuts at

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one end only, places the wormed rod of each traverse in the hole at the lower part of the upright and screws on the nut, without, however, screwing it up tight. He adjusts the other lower traverse in the same manner. The upright is thus supported by the two lower traverses. The two men then each take an upper traverse, T¹, unscrew the nuts and place the wormed rods in the upper holes of the upright, screw on the nuts without screwing them up tight. They then bring the second upright which they join with the traverses in the manner described above, and having applied the remaining nuts they tightly screw up these together with the other four nuts already placed in position. After this is completed, the cage-support can be placed where required, and is ready to receive the loaded stretcher.

Recent alterations in military medical war matériel.

In speaking of French military medical and surgical war *matériel* I would here observe that a full and interesting report on this subject has recently been made by Surgeon-Colonel Godwin, Professor of Military Surgery at Netley, which is published in the Army Medical Department Report for the year 1888, Vol. XXX.; and I would therefore merely speak of the alterations which have been recently made in some of the articles of the equipment.

Although the rolling-stock of the "Service de Santé," constructed since 1871, has had no trial on the battle field, and has only been experimented on in the manœuvres, it has been the subject of careful criticism, and attempts have been made to remedy the most obvious defects.

(i.) "La Voiture de chirurgerie des ambulances" (*vide* A. M. D. Report, 1888, Vol. XXX., page 366). The contents of this waggon were formerly only accessible by a central narrow passage, where it was only possible to move with difficulty. The contents were pressed into pigeon-holes or drawers, from which they could only be removed one by one. This paralysed the rapidity of supply both in action and when packing baggage or changing camp. The framework of the "voiture de chirurgerie" not permitting the entire removal of the central passage and all the pigeon-holes without destroying the solidity of the body of the carriage, this passage has only been removed in the anterior half. On each side, between the front and hind wheels, a door has been opened on the side of the waggon. Now, therefore, the surgical *matériel* can be reached from three sides at once.

(ii.) The new "Voiture médicale régimentaire" (*vide* A. M. D. Report mentioned above, page 365) has also been arranged in a manner more favourable to rapidity of supply, and loose material has been placed in compartments in the front, where it can be readily reached. The same is the case with the canteens and paniers, the contents of which can be obtained without unloading the waggon, for the stretchers have been placed in a separate compartment below the floor. The height of this waggon has been reduced, and its centre of gravity lowered, the risk of the vehicle being upset is in this way diminished.

(iii.) The "Voiture médicale régimentaire de cavalerie," modified in a similar manner, has besides been mounted on four wheels, provided with a seat for the driver and a shaft for two horses, so that it can follow squadrons at a rapid pace. It is thought desirable that this pattern should be introduced into the artillery service.

(iv.) The laying out and folding up the "service stretcher" demanded some experience which all bearers could not have. The cross-bars beneath the stretcher have now been replaced by a flat metallic bar, jointed at its centre, and opening easily like the legs of a pair of compasses, so that the stretcher of 1890 can be arranged by a stretcher-bearer at first sight.

(v.) The "First Field dressing," at present authorised, has been recently introduced, but this ("pansement individuel") is described by Dr. Notter in his report on First Field dressings in the Army Medical Department Report for the year 1889, Vol. XXXI., page 349.

(vi.) Fracture Apparatus, &c.—Splints of iron wire, easy and rapid of application, have been given the preference for use on active service by surgeons of experience. Instead, however, of employing those which are ready-made beforehand, wire gauze of a special kind is supplied and carried rolled up, and from this material splints of appropriate size and

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shape are cut and applied at the time they are required. When this wire gauze is unrolled it is found that it possesses an elastic rigidity crossways contrasting with a considerable degree of flexibility in the direction of its length. It can be cut readily with a pair of scissors. The simple dressing of the wound is first completed, the fractured limb is then covered with a layer of wool, and the wire-gauze splint applied immediately outside. If considered advisable it can be applied outside the clothes.

There are only three joints which cannot be conveniently immobilised by this means, and for which splints previously prepared must be retained, viz., the elbow, the ankle, and the hip.

(vii.) Antiseptic Surgery.—In panier No. 0 all the necessary supplies have been introduced for making the antiseptic solutions, &c.

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APPARATUS FOR DISINFECTION OF WALLS, CURTAINS, CARPETS &c, BY ANTISEPTICISED STEAM.

(GENESTE, HERSCHER & Cº.)

JUDD AND Cº LTº LITH 63 CARTER LANE. DOCTORS COMMONS. 4337.2.93.

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STRETCHER-SUPPORT *for the Transport of Sick and Wounded in Railway Waggons or Steam Boats. (Bréchot, Desprez and Amelinè apparatus.)*

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PLANCHE I.

CAGE PORTE-BRANCARDS.

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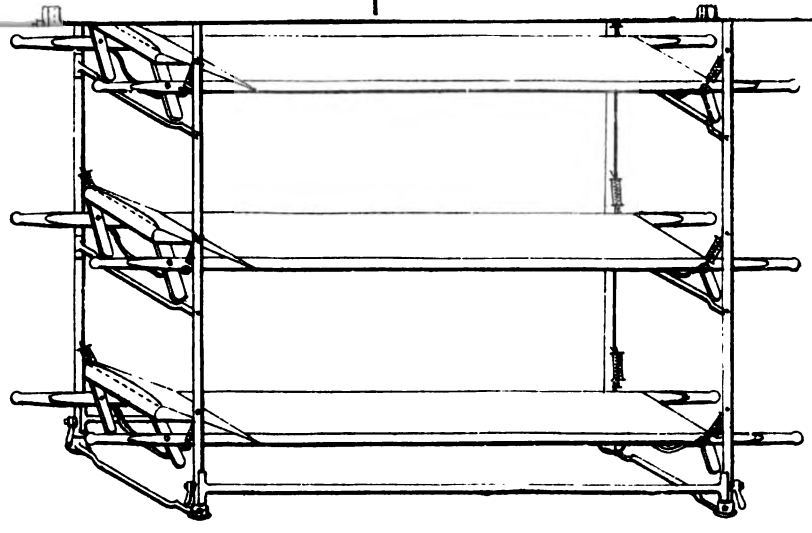

STRETCHER-SUPPORT *for the Transport of Sick and Wounded in Railway Waggons or Steam Boats. (Bréchot, Desprez and Ameline apparatus.)*

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APPENDIX No. IV.

ON THE HYPODERMIC ADMINISTRATION OF MERCURY IN THE TREATMENT OF SYPHILIS.

By Surgeon-Captain F. J. Lambkin, Army Medical Staff.

After having been employed as a remedy for syphilis for over four hundred years, and having passed through various stages, in the ups and downs of heated discussions, as to its value in the treatment of the disease, I think that at the present time it is acknowledged, by the vast majority of the profession, that mercury is the true agent to be employed in the endeavour to eradicate the virus of syphilis, and that without it nature (in the majority of cases) is unable to expel the said virus.

That great authority, Mr. Jonathan Hutchinson, considers "that mercury is an antidote to syphilis," an opinion in which all who have had extensive experience in the treatment of syphilis will agree.

The chief reason why mercury fell into disrepute in the olden days was, because it was thought that to be of any benefit to the patient it was necessary to salivate. This, of course, led to frightful consequences.

In later years, if it has again fallen in the estimation of some of the profession, I cannot help thinking that this is due to the manner and mode in which the metal is administered, viz.: it is given internally for an extended period in either large or small doses, the patient is kept to his bed, and diet is restricted very much, the consequence being that the digestion gets interfered with, and the patient goes from bad to worse. The mercury has to be stopped. Now, if we consider the nature of the disease, we will see that it is pre-eminently of a low form, attacking with most virulence patients of weakly constitutions, or who, at the time they become infected, are in a bad state of health. Remembering this fact, it appears to me that the foremost thing to do in the treatment of the disease is to get and to maintain the patient in the best possible state of health, a state of things very much against the administration of mercury internally, for to give it in doses of sufficient quantity, and continue it over a period long enough to accomplish the desired end, the digestion becomes interfered with, diarrhœa is induced, slight signs of salivation appear, and general cachexia brought on. Then the mercury must be stopped. The health of the patient is much depleted, rendering him an easy prey to the further ravages of the disease.

Formerly I used to treat all my cases by the internal method, but in the ones I was able to watch more closely (those of officers) I found that after the patient had been taking the metal for, say, three or four months his general health became affected as above described,—probably the disease recurred in some form or other—the patient became heartily sick of taking the medicine, and refused to continue it any longer. Then he was ordered a tonic and the mercury stopped; he at once began to pick up. But after a month or so the disease broke out again in a more severe form; mercury was again resorted to, with the same results. Things may have gone on like this for a year or so, when one generally lost sight of the patient, but certainly he was not quite cured of the disease.

I quote the following case, viz.:—

A. C——, a young officer, consulted me. He stated that he had contracted syphilis a year previously. He showed me a large induration on the

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glans penis; this had been most persistent. He said that from the day he first noticed it he had been under treatment and for five months he had taken hyd. c. cretâ gr. i. from four to five times a day. The induration greatly diminished. At the end of that time he became very weak and debilitated, appetite was very bad, and he suffered now and then from diarrhœa. He was advised by his medical men to stop the mercury, this he did, and his health rapidly improved; but at the end of three weeks the induration had returned to its original size. He was then put on a course of liq. hydrarg. and iodide of potassium, and had been taking this together with grey powder in varying doses, up to the date when I saw him.

When he came under my notice he had a large induration on the penis, also induration of the inguinal and cervical glands, and an ulcerated throat. He was very anæmic and weak; appetite very poor: on the whole he was very much pulled down. He said he had been advised by a "friend" to go to Aix-la-Chapelle, but he decided to remain under me for the present, he did so for two months, but although the induration decreased very much his health did not improve, and the disease kept breaking out in various ways. He then made up his mind to go to Aix; then he went, and in three weeks' time he wrote to me saying that he felt much better, all signs of the disease, with the exception of the induration, had disappeared, and even the latter had very nearly done so. I saw him five weeks after his departure for Aix. I was astonished at the improvement he had made, every sign of the disease had gone, he had put on weight and looked a different man.

The case made a great impression on me, as I knew the patient had spared no expense in getting the best advice, nor trouble in carrying it out, he was a regular liver and very abstemious.

About this time I had two similar cases, which eventually found their way to Aix, and returned thoroughly restored to health.

I was so struck with the above cases that I determined to pay a visit to Aix and see for myself of what the treatment really consisted. In October, 1889, I went there with introductions to Dr. Brandis, the celebrated surgeon of that place. He was very kind to me and afforded me every facility of seeing of what the treatment consisted.

Briefly it is as follows:—

1. The patient is advised to rise early and to take a walk to the sulphur springs, and then he drinks a tumbler or two of the natural waters.
2. After the above, breakfast of a very light nature.
3. From one to two hours later he proceeds to the baths, where he remains immersed in a bath of the natural water for not less than 20 minutes.
4. Half-an-hour later a professional rubber rubs into the patient's skin 75 grains of mercurial ointment, a little stronger than the ung. hydrarg. (B.P.). The rubbing lasts 15 minutes, and the parts of the body into which it is rubbed are selected as follows:—First day, into the calves of the legs; second, the thighs; third, back; fourth, chest; fifth, sides; sixth, arms; returning then to the calves. By alternating the parts rubbed the chances of their becoming sore from the friction is very much lessened.

This treatment lasts generally about six weeks, or, as they say at Aix, "Forty rubbings is the cure." During this time the patient is directed to pay great attention to the cleanliness of the teeth, to be careful to brush them well after each meal, and in the intervals to frequently wash the mouth out with a strong mouth wash, consisting of acetate of lead and sulphate of alum.

His diet is not restricted in any way, he is advised to live well, and to drink freely of new milk (which can be got in abundance at Aix). Spirits are forbidden, but beer and the Rhine wines and claret are allowed. A fair amount of exercise is advised, and remaining in the open air as much as possible is insisted on.

During a visit of nearly three weeks at Aix I saw patients of all nationalities, the great majority being English. Class was well represented, from the peer to the prizefighter and professional strong man. Most of the English cases I met were of at least a year's standing; they had been during the time under treatment at home, but the disease recurring over and over

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again, and being sick of taking medicine internally, they at last found their way to Aix. This was the history in two out of every three patients I met. They were all loud in their praises of Aix, and the treatment and the benefit they had derived from it, and regretted not having gone there before.

Here I may remark that it is astounding to me the ignorance that exists (whether real or assumed) among the profession in England concerning the treatment that is carried out at Aix-la-Chapelle. I will quote the following passage from Hilton Fagge's "Principles and Practice of Medicine," one of the latest standard works of medicine:—"There are greater advantages in "residence at the seaside than at Aix-la-Chapelle, where, if report speaks "true, the real method of cure is neither the baths or the waters but mer-"cury." One cannot help feeling surprised, not to say disappointed, at such a remark coming from the author, as he clearly shows that he is in doubt as to what the treatment at Aix really consists, and this is all the more astonishing considering the short distance it is between England and Aix, and that for years scores of Englishmen, who have been under treatment at home, have been in the habit of going there and returning much benefited.

By his remark he also suggests that the German surgeons make a secret of the treatment at Aix. This, to anyone who has taken the least trouble to find out, is quite untrue. Everything there is done in the most open manner. As for their claiming for the waters and baths the success of the cure, I will quote what passed between Dr. Brandis and myself. He said, "Why do you "not carry out this treatment in England?" I remarked, "How can we "without the Aix waters?" He answered, "You do not need the waters, "any water will do provided it is soft. The baths are used solely for the "purpose of preparing the skin for the inunction of mercury."

My reason for alluding so extensively in this paper to the treatment of syphilis as carried out at Aix is, that from it I learned that by far the best channel for the introduction of mercury into the system is through the skin, and that the internal administration of the metal is radically wrong, and in my opinion it should never be employed, for reasons I have given above.

On my return to England I gave the treatment every trial, and treated all my syphilitic cases at Shorncliffe Station Hospital by it. In my essay for promotion which I wrote in May 1891 I gave the notes of these cases, showing the marked success I had with this treatment. I do not intend to allude to them in this paper further than to remark that, in spite of the marked success I had, I saw one great difficulty to its ever becoming the general treatment, especially in the military service. This difficulty was, because I found it quite impossible to have it thoroughly carried out. The patients became careless, as did the orderlies put to superintend the treatment. I found that it was not done properly unless I personally saw that it was. I could not help seeing that in a hospital where there were a great number of patients, it would never hold ground. One other drawback to it was that it was dirty.

It was then that I thought of a treatment which had been tried over and over again, but had always been given up as a failure, for many reasons, the principal among them being, it was stated, its liability to produce tetanus and abscesses, besides being very painful. I allude to the hypodermic injection of mercury. In spite of these drawbacks, it struck me that if it could possibly be carried out it would be the greatest boon to the military surgeon, and at the same same a direct saving to the State, as whilst undergoing it there would be no need for the soldier to be absent from his duty.

Accordingly I determined to try it, and on June 2nd, 1891, I gave my first injection. I used a solution of perchloride of mercury $\frac{1}{8}$ gr. to 20 mm., injecting the 20 mim. deep into the gluteal tissues. There was a good deal of pain at the time, but no other bad sign followed. I repeated the injection once a week, and did this for some time. The case I treated thus did very well, in fact so well that I began to use the injection in several of my syphilitic cases, and they also made rapid recoveries. In all I gave 60 injections with the above solution, only one of which was followed by an abscess.

As I said above, there was a good deal of pain following the little operation, and this in some instances lasted a day or so. This fact was very much

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against the method, and patients (especially officers) objected very strongly to the operation. I was obliged to discontinue it in most of my cases. I also tried the sal alembroth solution, but pain was just as great with it.

Luckily for me at this time I came across an officer who was suffering from syphilis; he told me that he was being treated by Dr. Whitmore of London by the hypodermic method, and that the injections which he received caused him no pain. I wrote to Dr. Whitmore, and asked him what the solution he used was; he very kindly told me that it was a solution or cream which had lately been introduced by Dr. Althus of London. The following is its composition:—

℞ Hydrarg. ʒj.
Lanolin pur. ʒij.
Ol. carbol. (2%) ʒj.

This must be thoroughly mixed before using. He said that he had been using it hypodermically for some time, and that, whilst it caused absolutely no pain, he had had excellent results from it.

I wrote and got the cream from Messrs. Savory and Moore, London.

The first case I treated with this preparation was W. F——, an officer, aged 25, who stated that about two years previously he contracted a hard sore on his penis, had had induration of the inguinal and cervical glands, followed later on by ulceration of the mouth and tongue, and he was covered by a roseolar rash. Under the internal exhibition of mercury he got rid of these signs to a great extent, but he had never regained his former good health, and in spite of the fact that he had been taking mercury on and off for the last two years, the disease was constantly breaking out in the shape of ulceration of the mouth and tongue, and in the case of the latter it was most persistent. He had lost weight considerably.

When I saw the patient, besides suffering from ulceration and thickening of the tongue, his right testicle was enlarged and hard, which was no doubt syphilitic orchitis; it had been in this state for some months, and in spite of treatment it had got no smaller.

On September 12th, 1891, I first saw the patient, and on that day gave him an injection of the above preparation. I injected 10 mins. of it deep into the gluteal muscles, pushing the needle of the syringe as far as it would go. These injections I repeated once a week until the end of October 1891. After the first two or three injections there was a marked change for the better in the ulceration of the tongue, and it had quite healed after two more, and the thickening had quite disappeared. By the end of October the testicle was much reduced in size, and the patient had put on flesh, and looked ever so much better. He expressed himself as feeling much stronger, and better than he had done for some months. About this time he was obliged to leave England on account of some private business, and I did not again see him until February 12th, 1892.

In the meantime I had heard from him that the testicle had not got any smaller, and that the ulceration had returned on the tongue. He was being attended by a well-known surgeon, who was giving him mercury and iodide of potassium internally, and the testicle was being strapped with some mercurial preparation.

On his return to me in February the patient looked anæmic, and had lost flesh considerably. He complained of loss of appetite, ulceration had again broken out on the tongue, and the testicle was in about the same condition as when he left me in October.

I at once stopped the medicine he was taking and resumed the "hypodermic treatment." In four weeks' time, "he then having had four injections," all ulceration had disappeared, testicle had almost regained its normal size, and he had quite regained his health. I continued this treatment for some months with the greatest benefit to the patient; soon the testicle was quite healthy, and when last I saw him, October 2nd, 1892, he had had no return of the disease, and was in robust health. This patient used to come to me one day a week for an injection; the little operation never caused him the least inconvenience, and he was able all the time to be at his duty, as also to hunt.

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He expressed his wonder to me at the marked effect the treatment had on his disease, and he was no less grateful for it.

The next case. T. H——, an officer, aged 32, had contracted the disease at the end of the year 1888. The history showed that he had had a hard sore, followed by a papular eruption, and ulceration of the tongue and mouth. He had been under the internal treatment more or less since he first contracted the disease, which used to disappear, but broke out afresh over and over again. Ulceration and thickening of the tongue being his chief trouble.

When I saw him, besides extensive ulceration of the tongue, he had two large ulcers on the calf of his right leg, the result of gummatous disentegration.

On December 20th, 1891, I began the weekly subcutaneous injections of mercury, and I continued them for eight months. Long before I stopped all signs of the disease had disappeared. The treatment was carried out with no interruptions for these eight months. Patient, "who led a very active life," suffered no inconvenience, and when last seen by me, October 1892, he had had no return of the disease, and was in better health than he had been since he first contracted the disease.

J. J——, aged 27, also an officer, contracted the disease in India May 1891. Up to the time I saw him he had been under treatment, and had taken mercury steadily for months and months. When he came to me in January 1892 he was very weak and debilitated and suffered much from diarrhœa. He stated that on account of the latter he had been obliged to give up taking mercury. His throat was very severely ulcerated.

This case has a peculiar interest for me, as at the time he came under me he was a patient of a brother officer of mine, who stated that he could get no good of him, and handed him over to me to try my method on him. I will only say here that from the first injection he made wonderful progress towards recovery, the disease seemed to melt away; and he rapidly regained his former good health. I continued giving him a weekly injection from Jan. 10, 1892 until the time I went abroad October 1892. He suffered no inconvenience. When I first saw him he was on the sick list and had been for some time. After the first injection he was taken off and there was no occasion to put him on it again.

I heard from this officer in Jan. 1893, stating that he had had no return of the disease and that he was in the best health. He wrote expressing his gratitude for the treatment.

Since the time I began the "hypodermic method" in Sept. 1891 until Oct. 1892 I treated in all ten officers at Shorncliffe by it. The remaining seven were very similar in character to the three I quote, and with them I had the same success; all of them were most enthusiastic in singing the praises of the treatment.

None of them suffered the slightest inconvenience from it, and were quite willing, and in some cases anxious, to continue it longer than I considered necessary.

Among the men I treated in all during the above period fifty cases, which were of all descriptions. Pte. P. C.—— had been under treatment in hospital for seven months. He had taken mercury in every form, as also iodide of potash. His palate was badly ulcerated and he was covered with a papular eruption. A brother officer of mine, whose patient he was, stated that the man made no progress, and he handed him over to me to try my method on him. This officer could testify to the marvellous effect the first two injections had on the symptoms. I continued weekly injections for eight weeks, and then the patient, being quite free from the disease, and in good health, was discharged to his duty; but he attended weekly for three months longer for injections. I may mention that during the last two months he was in hospital he gained 16 lbs in weight.

The treatment in this case was closely watched by the medical officer in charge of the hospital, Brigade Surgeon Lieut.-Colonel Tomlinson, and he was very much impressed at the manner the disease yielded under it.

Pte I. M.——contracted a hard sore on 7th July and was treated for it in hospital for three weeks. He was re-admitted Nov. 11, 1891. On admission he was very anæmic and cachectic, and altogether in a very bad state of health. The trunk

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and legs were covered with rupeal ulcers, and the nasal bones, were exfoliating. On the day of his admission I gave him a first injection, which I continued to do once a week for five months, two of which he was in hospital and the remaining three at his duty, but attended weekly for an injection. From the first injection the man made rapid progress towards recovery, and at the end of two months was quite free of all symptoms and apparently in good health.

Corporal H. H——, West Kent Regiment, had been under treatment in hospital for six months, and when handed over to me he was suffering from syphilitic iritis; this, it appears, was of a recurring nature; he was also covered with a papular eruption, which was very obstinate. I began injections 12th January 1892, and continued to give one weekly for two months, when all symptoms had quite disappeared, and he was in good health. He was discharged to his duty, but attended for a weekly injection for two months longer. There was no fresh outbreak of the disease.

I have the notes of all the cases I treated by this method, but do not think it necessary to quote any more. I will only remark that in all I had similar success. My custom was to discharge a man to his duty as soon as all active symptoms of the disease had subsided, and to see that he attended at the hospital one day a week for an injection. He did this for two or three months longer when he was probably cured. In all the cases I treated thus I had no recurrence of the disease months later.

The soldiers got great faith in the treatment, as is shown from the fact, that if by any chance a man was unable to attend on the regular day for an injection he invariably came of his own accord on the following day.

I had one case, that of a soldier who was the subject of chronic syphilitic orchitis; he had been under treatment in hospital many times for it, but in spite of everything the testicle remained enlarged. On hearing from his comrades of the success of the hypodermic treatment, he came and asked me if he might attend with the other men for injections. He did so for nearly six months, before the end of that time his testicle was quite normal in size, and his health had improved very much.

During the period from September 1891 to October 1892, including all cases, I gave close on one thousand injections of the mercury and lanolin preparation. In none did an abscess follow; in fifty slight indurations remained at the site of injection for a few days; there was absolutely no pain, nor any other inconvenience following the operation.

As to the preparation used, viz., "Dr. Althus's mercurial cream," the composition of which is given in an earlier part of this paper, at first I was supplied with it by Messrs. Savory and Moore, but later on the materials for it were indented for and supplied by Government, and the preparation was made up at the dispensary in the station hospital, Shorncliffe.

In dispensing it it is necessary to rub the mercury with the lanolin without heat.

There is one drawback to the preparation, viz., that in cold weather it is apt to become semi-solid, rendering its use very difficult, and heat must only be applied with great care, as, if it be to great the metal will fall to the bottom. This can be partially obviated by keeping it in a warm cupboard, and in very cold weather adding a little more oil to it.

Before using it ought to be well mixed with a glass rod kept for that purpose.

The syringe I use is one supplied to me by Messrs. Krone and Sesseman, Manchester Square, London; it is very simple, made of ebonite all through. The piston is graduated into minums. The needle is fitted into an ebonite socket, which goes on to the syringe, but is quite distinct, and can be easily detached, a very necessary arrangement, as it has to be removed when filling the syringe. This little syringe is an excellent instrument; it costs 2*s.* 6*d.* The one I originally bought, and which I have used all through, is now as good as ever.

The needles cost 6*d.* each, and it is necessary to be supplied with a good stock of them, as I very soon discovered, that to avoid pain, the needle must be "perfectly sharp and free from all corroding." As soon as a needle becomes in the least tarnished or blunt it ought to be disused. At the same

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time the keenness of the needle can be retained by occasionally passing it through fine sand paper.

I may here state that another advantage which the mercurial cream has over the perchloride or sal alembroth solutions, is that it does not corrode or tarnish the needle, and with it I have gone on using one needle for a month at a time, whereas a needle lasts for a very short time with the other solutions.

As to the site best suited for injection I have found the glutcal region the best, although I have sometimes injected into the deltoid.

Before injecting the needle ought to be disinfected by dipping it into a boracic solution. In performing the little operation one thing is absolutely necessary, viz., that the needle be pushed straight, as far as it will go, into the tissues, so as to avoid abscesses; if the fluid be injected into the subcutaneous tissue abscess will follow.

As a rule I have found that one injection per week is enough, but in one or two very severe cases with cerebral symptoms I have given two.

Whilst in hospital I give my patients a liberal diet, and often a bottle of stout or beer, allow them up, and insist on their being as much as possible in the open air.

Officers who were my patients I advised to avoid spirits, but they might drink a liberal allowance of claret, port wine, or beer, at the same time eating nourishing food, and spending as much of their time as possible out of doors. Flannel to be worn next the skin, and cold and chills avoided. Exercise was strongly advised.

With these precautions I am sure that there is not the least danger of any untoward effects following the injections. Out of all my cases I had not one of salivation, nor was I obliged to stop treatment on account of the gums becoming sore.

Besides the undoubted advantage as to the results of cases treated by this method, there is one which in the case of the soldier renders it still more valuable. Formerly, and indeed at the present time, when a soldier contracts syphilis he is admitted into hospital, and there treated until all the primary signs or any active symptoms of the disease have disappeared. He is then discharged to his duty, when all treatment of course is suspended, the disease breaks out afresh, he remains at his duty as long as he can, but eventually comes to hospital, is readmitted, and under treatment the symptoms again disappear, when he is again discharged to duty and treatment stopped. Again the disease breaks out and again he is admitted to hospital, and this series of events goes on. As he never gets a lengthened treatment he never gets rid of the disease; he goes abroad to the tropics, and is then an easy prey to the diseases common in those regions, or to the further ravages of syphilis, eventually he either is invalided and is of no further use as a soldier, or he dies.

In the case of the hypodermic method what would be easier than when a man get syphilis to admit him to hospital and then treat him until all pressing signs of the disease have disappeared, then discharge him to duty, but order him to attend one day a week for an injection, then he could be submitted to a lengthened treatment, and the disease eradicated before the man is called upon for foreign service.

I feel confident that if this was properly carried out the invaliding and death rates throughout the service would be much diminished.

In conclusion, I will say that in this paper I claim nothing original in the treatment above described, as I know that for many years the hypodermic injection of mercury in syphilis has found much favour in Germany, notably at Breslau; also that the identical treatment described by me was, before I thought of it, practised by Drs. Althus and Whitmore in London. My object in writing it is twofold. First in fulfilment of a promise made by me to Brigade Surgeon Lieut.-Colonel Tomlinson, A.M.S. (who was medical officer in charge of the Station Hospital, Shorncliffe, during the period in which I carried out the treatment), that I would record the results of my cases. Secondly, in the hope that it may possibly be the means of drawing the attention of the profession, especially that of the Medical Staff of the army, to this treatment, and stimulate them to give it an extended trial. If they will I feel certain that before long they will discover what a boon it is in the

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treatment of syphilis, and in the case of the soldier, while they will make his life less of a burden to himself, they will render a great service to their country by enabling him to continue to give his services to it, and thereby save an enormous expense; at the same time they will lessen considerably the invaliding and death rates of the army.

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APPENDIX No. V.

A CASE OF STRANGULATED OBLIQUE INGUINAL HERNIA. HERNIOTOMY.—RECOVERY.

By Surgeon-Captain J. D. T. Reckitt, Army Medical Staff.

The infant son of Bandsman H——, 2nd Royal West Kent Regiment.

I saw this child, aged eight months, at 11 a.m. on December 5th, 1892, having been attending it for several days before for pneumonia, and from which it was nearly convalescent, when I was called to it on the above date.

The child presented a very pale and nipped countenance and was evidently suffering great pain. The mother informed me for the first time, that her child had suffered from hernia since birth, that the bowel had been down since 7 p.m. the night before, and that though it had often been down for several hours at a time, she had always been able to replace it herself with little or no trouble.

Vomiting had been going on at frequent intervals since 7 a.m. of December 5th, and the bowels had acted twice during the night.

I made a careful examination of the hernial tumour which was the size of a small Tangerine orange, very tight and painful on palpation, and with no impulse that I could detect when the child coughed or cried. The pulse was so thin, that though it could be detected at the wrist, it could not be counted.

I at once tried by gentle taxis to return the bowel, but efforts in this direction had not the slightest effect. I then directed the mother to apply hot fomentations to the swelling and if that failed, to place the child in a hot bath, afterwards to keep it at rest in the recumbent position with the pelvis well raised. On account of the great pain and restlessness, I ordered a sedative and stimulant mixture of Sp. Ammom Co: Sp. Chloroformic. and Tinct. Opii m. ½ every three hours, and left. At 2 p.m. when I called again, there was no change and gentle taxis as before had no effect whatever. At 7 p.m. I placed the child in a hot bath myself and whilst therein, again tried taxis, but all to no purpose, and I then reluctantly decided (on account of the tender age and semi-collapsed condition of the patient) to attempt relief by operation.

At 10.30 p.m. aided by the best light we could obtain at the parents' quarters, the child was placed well under chloroform by Surgeon-Captain O'Halloran, Army Medical Staff, and taxis again failing, I transfixed the integuments and laid open the sac. I easily ran my little finger all round the sac, but could not define clearly the neck or the external abdominal ring, and we had noticed that on opening the sac, the usual small amount of fluid did not escape.

This gave us a guide, and though puzzled, I made a small cut into a part of the next covering of the hernia, which I pinched up with dissecting forceps, with the result of an immediate escape of the serous fluid we had previously looked for; and on laying this sac open to the extent of the outer wound, came across the bowel. The stricture was very tight and it was a matter of considerable difficulty with such a small patient to relieve it, but which when done, allowed the bowel (roughened in one or two patches) to be easily returned.

I then tried to excise the inner sac with the idea of radical cure, but on account of the indifferent light and the appearance of the left testis in the wound whenever I made traction with the forceps, and also on account of the

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dangerous proximity and uncertain position of the spermatic cord and vessels, the idea was abandoned, and instead, the edges of both sacs were drawn together along with those of the integuments by means of silver wire and an iodoform and blue wool dressing applied.

December 6th.—The child slept at intervals. No return of vomiting, and bowels acted several times during the night.

The infant progressed without a bad symptom, the wound healed by first intention, and on December 19th, a fortnight after operation, it seemed quite well and was fitted with a truss.

Remarks :—This case seems well worth reporting on account of the following interesting features, 1st, the tender age of of the patient, and 2nd, the presence of two sacs. In my own experience extending over some 14 years, I never had occasion to resort to herniotomy in children so young, and Mr. Edmund Owen of St. Mary's Hospital, tells me he has very rarely had to operate on infants for strangulated hernia. In this case, however, both Surgeon-Captain O'Halloran and myself failed to reduce the bowel under chloroform, and at the time of operation the life of the child seemed to be a question of only a few hours; but the chance, though apparently a slender one, being offered to the parents, they readily gave me their consent. The existence of the two sacs was of course easily explained on reference to the anatomy of the hernia, which was of the "infantile" variety.

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APPENDIX No. VI.

A CASE OF HÆMOPHILIA.

By Surgeon-Captain GRENVILLE E. MOFFET, M.B., C.M., Army Medical Staff.

Private G. A. S——, 1st Cameron Highlanders, aged 18 years and 8 months, was brought to hospital on the evening of August 28th suffering from severe hæmorrhage from the left upper jaw, following the extraction of two molar teeth. The operation had been effected without any difficulty in the morning, but no unusual bleeding occurred at the time; this only began during the afternoon, and became alarming about 7 p.m.; when seen by me there was a constant and rapid oozing from the gum.

Condition on Admission.—The loss of blood had been considerable, and the patient was in an exhausted state; the skin and mucous surfaces were blanched, yet the pulse was of good volume, 110 per minute, regular but somewhat compressible; heart sounds regular and normal; respiration natural in frequency and rhythm; no sighing nor tendency to syncope.

Subsequent Progress and Treatment.—The alveolar cavities were plugged with lint steeped in perchloride of iron; the gums swabbed with the same; a mixture of digitalis and iron was ordered to be given every four hours; patient was placed in bed with the head slightly raised, and carefully watched. By these means the bleeding was arrested for four hours, when it again began, but was checked by a repetition of the treatment. Thus matters continued for about 72 hours, the hæmorrhage bursting out at intervals of from four to six hours, and being temporarily arrested by local styptics, combined with pressure, and the internal administration of hæmostatics, until the morning of the 1st September, when the hæmorrhage, which had almost ceased, was aggravated by the patient trying to raise himself in bed; and in a short time he had passed into a state of collapse. The skin and lips were bloodless; pulse imperceptible at wrist; respiration short, shallow, and suspirous; breath and extremities cold; conjunctivæ pale but sensible; pupils dilated but responsive to light; patient seemed in great distress, tossing his arms about, and complained of headache, giddiness, nausea, thirst, and a sense of sinking at the epigastrium. He had lost about two pints of blood, and the gum was still oozing. An ounce of brandy was given immediately; heat was applied to the extremities, and sinapisms to epigastrium and præcordium. The partial syncope had caused a temporary arrest of hæmorrhage by 11.30, a.m. when Dr. Cruickshank, of Nairn, met me in consultation. He advised plugging the alveolar cavities with dry lint, and placing the patient on a mixture of digitalis and ergot; this, however, only proved of temporary benefit. The bleeding recommenced at 5 p.m., when plugging with lint steeped in a saturated solution of tannic acid was resorted to, pressure being also applied to both sides of the gum by means of a piece of cork cut to fit the gum, and kept *in situ* with the gag from the stomach-pump case. All nourishment, consisting of milk, egg-flip, raw meat juice, and port wine, was given cold and per rectum. By these means hæmorrhage was checked for 30 hours, but long before this the compress had become loosened and had come away; the gum looked perfectly clean and healthy. All nourishment was, however, still given per rectum, although patient felt so much better that he craved for solid food. September 3rd.—Bleeding began at 12.30 a.m., and in spite of all treatment continued with slight remissions till 10 a.m., when patient was again reduced to a condition similar to that noted on

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1st September. After consultation with Brigade-Surgeon Grant, Inverness, and Dr. Corbet, Campbelltown, the effect of the actual cautery was tried (the thermo-cautery not being available), but utterly failed to arrest, though it lessened the hæmorrhage, which only ceased after the alveolar cavities had been plugged with lint steeped in pernitrate of iron, and lunar caustic applied to the gums. At 6 p.m. oozing began from several points on the gums, and, notwithstanding the application of various local styptics, continued with slight remissions till the 6th September, when patient was once more reduced to a critical condition. Transfusion was considered, but no apparatus being obtainable, the effect of general treatment, unaided by any local application, was tried. With this object enemata of turpentine and laudanum, 20 minims of each in two ounces of egg-flip, were ordered every three hours. After the second enema the hæmorrhage was greatly moderated, and by 9.30 p.m. was completely arrested. From this time till the same hour on the 11th September, *i.e., for five clear days, there was no recurrence.* During this interval patient complained of pains in all the large joints, which were neither swollen nor inflamed; no petechiæ nor ecchymoses were visible over any part of body, except one or two spots on the face caused by the pressure of the bandages, which were employed to keep the gag in place. Notwithstanding these pains patient looked and felt very much better; he slept well; his lips assumed a ruddy hue; the pulse although compressible was regular; respirations natural; bowels regular, and temperature normal. Patient craved for solid food and fruit, which was not allowed for the first three days; but after that he was placed on stewed chicken and stewed apples in addition to milk and beef tea.

Suddenly at 9.30 p.m. on 11th September, while patient was asleep, the hæmorrhage came on again, the blood forming firm clots in the mouth. Within a short time the loss of blood exceeded two pints; the skin and lips were quite blanched; the temperature rose to 99·6; the pulse soon became irregular and feeble, and both carotid arteries pulsated strongly. Turpentine and laudanum enemata were immediately begun, and local treatment was also persevered in, but the hæmorrhage continued in spite of all treatment till the evening of the 13th September, when patient lapsed into a state of intense collapse, and died early the following morning, 16 *days having elapsed since the hæmorrhage began.*

Post-mortem Appearances.—A very complete examination was made twelve hours after death, but beyond a markedly anæmic condition of the skin, mucous membranes, and viscera, no abnormal conditions were met with, except such as are specified below.

Cranium.—Dura mater thickened, and adherent to calvarium along the whole length of longitudinal fissure, by a deposit of organised lymph. Vessels of pia mater injected. Brain weighed 50 ounces.

Lungs.—Both were slightly emphysematous anteriorly; congested and œdematous posteriorly, and floated in water.

Vascular System.—*Pericardial sac* contained a small quantity of serous fluid. *Heart* weighed 13 ounces, and was enveloped in a thick layer of fat, but there was no evidence of fatty infiltration. Left ventricle was greatly hypertrophied; the walls of right ventricle were very thin, and its cavity contained a small organised clot.

Aorta and Venæ Cavæ showed no evidence of disease, but were very pale; their coats abnormally thin and translucent; and their calibre much diminished, the aorta at its origin only admitting the tip of the index finger; while the venæ cavæ only admitted the thick end of the blow-pipe in the post-mortem case. The same remarks as to translucency of coats, &c. apply to the large vessels arising from the arch of the aorta, and also to the facial vessels which were carefully dissected out.

Abdominal Viscera.—*Spleen* much atrophied, weighing only three ounces; surface pale; pulp healthy in texture and consistence.

Liver weighed 50 ounces; its upper surface was adherent to the diaphragm; the organ presented a waxy appearance, and sections gave the mahogany reaction with iodine.

Kidneys showed no visible amyloid change, but the capsules were adherent in both.

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Previous History.—The patient was well developed, and although somewhat pale there was nothing peculiarly characteristic in his appearance to suggest particular inquiry into his previous or family history before undertaking a simple dental operation. He himself was, however, quite aware of his weakness, for when subsequently questioned as to his antecedents he informed me that he frequently suffered from attacks of epistaxis, lasting with intermissions for days at a time, a statement confirmed by his comrades and by his mother, who also informed me that as a boy the patient had nearly bled to death from a trifling scalp wound (scar visible). He had never had any other serious illness.

Family history is well illustrated in the accompanying genealogical table, compiled from information obtained from patient's mother, a well educated and intelligent woman.

Remarks.—There are several points worthy of notice in this remarkably interesting case:—(1.) *Clinically*, the chief points are—the well-marked heredity extending over four generations; the duration of the case, 16 days; the marked periodicity in the outbursts of hæmorrhage; the sudden recurrence of fatal hæmorrhage after convalescence appeared established; and lastly, the partial success of general treatment after all local treatment had failed absolutely. (2.) *Physiologically*, the fact of the blood clotting firmly is worthy of note, as opposed to the usually accepted idea that the uncontrollable nature of the bleeding in these cases is largely due to diminished coagulability of the blood. (3.) *Pathologically*, the chief interest centres in the vascular system, in the diminished calibre of all the vessels examined, and the thinness and translucency of their coats. To this developmental defect the condition of hæmophilia is no doubt largely due, but this cannot be the only factor in its production. In addition to the congenital defect there seems to be some want of contractile power in the vessels themselves, and especially in the arterioles, as manifested by the failure of such drugs as ergot and digitalis in arresting hæmorrhage. It is quite possible that the vasomotor system plays a more important part in these cases than has yet been recognised.

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Genealogical Table of Private G. A. S——, Cameron Highlanders, showing the Hæmorrhagic Diathesis inherited from maternal Great-Grandfather.

(1.) B. I——. Great-grandfather. Died, æt. 92 years. Manifested hæmorrhagic diathesis very strongly, bleeding profusely from slightest cut. Also suffered severely from epistaxis, lasting several days at a time. Improved with age.

(2.) M. A. I——. Grandmother. Still alive, æt. 80. Manifests hæmorrhagic diathesis in same way as above, and has improved with age. Married R. A——.

G. A——. Uncle. Died, æt. 34, from hæmorrhage following a severe crush of leg. Unmarried.

E. A——. Aunt. Suffers from severe epistaxis lasting days at a time. Married H. T——.

H. T——, æt. 25. (Male.)

W. T——, æt. 19. (Male.)

J. T——, æt. 16. (Male.)

Patient's cousins. All bleed severely from slightest cut, and all show a tendency to severe epistaxis.

E. A——. Aunt. Married. Always suffered from post partum hæmorrhage during confinements, and eventually died from this cause, æt. 42.

Has left several children, none of whom have, as yet, shown any hæmorrhagic tendency.

(3.) M. A——. Mother. Alive; æt. 45. A delicate, anæmic-looking woman; suffers from severe epistaxis, and on two occasions nearly lost her life from post partum hæmorrhage. Married T. S——.

G. A. S——. Patient, æt. $18\frac{5}{12}$. Nearly bled to death when a child from a trifling cut on back of head. Also suffered from frequent attacks of severe hæmorrhage from nose. (This was corroborated by many of his comrades.) Died 14th Sept. 1892 of hæmorrhage recurring at intervals (after dentistry) and extending over a period of 16 days, **uncontrolled by treatment.**

W. S——. Brother. Died; æt. 3. Showed no tendency to hæmorrhage.

H. S——. Brother. Alive; æt. 13. Suffered from very severe bleeding lasting two or three days after the operation of circumcision.

A. S——. Brother. Alive; æt. 11.

C. S——. Sister. Alive; æt. 9.

B. S——. Sister. Alive; æt. $5\frac{8}{12}$.

B. S——. Sister. Alive; æt. $3\frac{4}{12}$.

Have shown no tendency to hæmorrhage as yet.

E. S——. Sister. Alive; æt. 15. Suffered from severe hæmorrhage after extraction of nasal polypus. **Also suffers from severe epistaxis,** lasting days at a time, and bleeds profusely from the slightest cut.

G. E. **Moffet,**
Surgeon-Captain, A.M.S.

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APPENDIX No. VII.

THE PARKES MEMORIAL PRIZE.

Surgeon-General Sir T. LONGMORE, Kt., C.B., *President of Committee.*
Brigade-Surgeon-Lieut.-Colonel J. LANE-NOTTER, M.A., M.D., *Treasurer.*
Surgeon-Captain R. H. FIRTH, F.R.C.S., *Secretary.*

Prize Essay Gold Medallists.

1883. Surgeon R. J. POLDEN, Indian Medical Service.
1886. Surgeon ANDREW DUNCAN, M.D., Indian Medical Service.
1889. Surgeon R. H. FIRTH, F.R.C.S., Medical Staff.
1892. Surgeon-Captain R. H. FIRTH, F.R.C.S., Army Medical Staff.

The following is the subject for the next prize:—

"MALARIAL FEVERS: THEIR CAUSATION AND PREVENTION."

The Prize is Seventy-five Guineas in Money and a Gold Medal, and is awarded Triennially.

The Competition is open to all Medical Officers of the Army, Navy, and Indian Services of Executive Rank on full pay, with the exception of the Assistant Professors of the Army Medical School during their term of Office. Essays to be sent to the Secretary of the "Parkes Memorial Fund," Royal Victoria Hospital, Netley, on or before the 31st day of December 1894. Each Essay to have a Motto, and to be accompanied with a sealed envelope bearing the same Motto and containing the name of the Competitor.

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APPENDIX No. VIII.

THE ALEXANDER MEMORIAL FUND.

TRUSTEES.

Inspector-General of Hospitals, R. LAWSON.
Surgeon-Major-General Sir W. A. MACKINNON, K.C.B., Director-General.
Deputy-Surgeon-General W. G. DON, M.D.

COMMITTEE.

Surgeon-Major-General Sir W. A. MACKINNON, K.C.B., Director-General, *President*.
Sir T. CRAWFORD, K.C.B., M.D., Hon. Surgeon to the Queen, *late* Director-General.
Surgeon-General Sir T. LONGMORE, C.B., Hon. Surgeon to the Queen, *late* Professor of Military Surgery.
Deputy Surgeon-General J. A. BOSTOCK, C.B., Hon. Surgeon to the Queen.
Brigade-Surgeon ALFRED F. S. CLARKE, M.D.
Inspector-General of Hospitals, R. LAWSON, Hon. Physician to the Queen.
Surgeon-General J. IRVINE, M.D., Hon. Physician to the Queen.
Brigade-Surgeon-Lieutenant-Colonel W. JOHNSTON, M.D.
Deputy Surgeon-General W. G. DON, M.D.
Surgeon-Major W. E. WEBB, M.D., *Honorary Secretary*.

PRIZE ESSAY GOLD MEDALLISTS.

1870. Assistant Surgeon A. B. R. MYERS, Coldstream Guards.
1873. Surgeon F. H. WELCH, Medical Department.
1876. Surgeon-Major J. H. PORTER, Medical Department.
1879. Surgeon JOHN MARTIN, Medical Department.
1882. Surgeon-Major F. H. WELCH, Medical Department.
1885. Surgeon JOHN MARTIN, Medical Staff.
1888. Surgeon ROBERT HAMMILL FIRTH, Medical Staff.
1891. Surgeon ROBERT HAMMILL FIRTH, Medical Staff.

At a meeting of the Committee held at 18, Victoria Street, S.W., on 6th March 1891, the prize of 50*l.* and Gold Medal of the value of 10*l.* was awarded to Surgeon Robert Hammill Firth, F.R.C.S., Medical Staff, for the best Essay on "The Use of Drugs in the Treatment of Disease in the Army, the Principles on which Medicines should be selected so as to meet the requirements of Field Service."

The essays of the unsuccessful competitors for the 1891 prize will be returned on application being made to the Honorary Secretary before 31st December 1893, but the unclaimed essays of unsuccessful competitors on previous occasions have, in accordance with the intimation in last year's volume, now been destroyed.

The subject for the next competition is "The Treatment of Wounds and Injuries of the Abdominal Viscera, as likely to be met with in Military Practice."

Essays to be despatched so as to reach the President of the Committee on or before 31st December 1893.

Essays are to be legibly written, superscribed with a brief motto, and accompanied by a sealed envelope similarly superscribed, containing the name and address of the author.

No essay shall exceed in length fifty pages of ordinary printed octavo, which may be estimated as amounting to 20,000 words (a page of octavo containing about 400 words). This limit to be exclusive of tables which may be added in the form of appendices.

The competition is limited to executive medical staff officers on full pay, but Assistant Professors at Netley are not allowed to compete while so employed.

W. E. WEBB, Surgeon-Major, *Hon. Sec.*

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